

TC-558

*USA Model
Canada Model
PX Model*



STEREO TAPECORDER

SPECIFICATIONS

Power Requirements:	120 V ac, 50/60 Hz (USA, Canada Model) 120 V ac, (100, 110, 127, 220, 240 V ac adjustable by authorized Sony personnel), 50/60 Hz (PX Model)	Harmonic Distortion: 1.2%									
Power Consumption:	70 W (MITI standards) 100 W (CSA, UL and IEC standards)	Inputs: MICROPHONE (phone jack) . . . 2 Sensitivity 0.2mV (-72 dB) Accept low impedance microphones.									
Track System:	4 tracks, 2 channel stereo or monaural	LINE IN (phono jack) 2 Sensitivity 0.06 V (-22 dB) Impedance 100 kΩ									
Reels:	178 mm (7 inches) or smaller	REC/PB (DIN jack) .. (PX Model only) Impedance lower than 10 kΩ									
Tape Speeds:	19 cm/s (7½ ips), 9.5 cm/s (3½ ips)	Outputs: LINE OUT (phono jack) 2 Output level 0.43 V (-5 dB) at load impedance of 100 kΩ, with PB LEVEL controls set to the center detent position (0.775 V = 0 dB . . . with PB LEVEL controls set to MAX.) Suitable load impedance higher than 10 kΩ									
Frequency Response:	NAB: (USA, Canada, PX Model)	REC/PB (DIN jack) .. (PX Model only) Output level 0.775 V (0 dB) with PB LEVEL controls set to the center detent position Impedance lower than 10 kΩ									
<table border="1"> <thead> <tr> <th>tape speed</th> <th>with normal tape</th> <th>with SONY SLH tape</th> </tr> </thead> <tbody> <tr> <td>19 cm/s (7½ ips)</td> <td>20~25,000 Hz 30~20,000 Hz (±3 dB)</td> <td>20~30,000 Hz 30~25,000 Hz (±3 dB)</td> </tr> <tr> <td>9.5 cm/s (3½ ips)</td> <td>20~17,000 Hz</td> <td>20~20,000 Hz</td> </tr> </tbody> </table>			tape speed	with normal tape	with SONY SLH tape	19 cm/s (7½ ips)	20~25,000 Hz 30~20,000 Hz (±3 dB)	20~30,000 Hz 30~25,000 Hz (±3 dB)	9.5 cm/s (3½ ips)	20~17,000 Hz	20~20,000 Hz
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19 cm/s (7½ ips)	20~25,000 Hz 30~20,000 Hz (±3 dB)	20~30,000 Hz 30~25,000 Hz (±3 dB)									
9.5 cm/s (3½ ips)	20~17,000 Hz	20~20,000 Hz									
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19 cm/s (7½ ips)	30~20,000 Hz	30~25,000 Hz									
9.5 cm/s (3½ ips)	30~13,000 Hz	30~15,000 Hz									
S/N Ratio:	56 dB (with SONY SLH tape) 53 dB (with normal tape)	HEADPHONE (stereo binaural jack) . . . accepts 8 Ω stereo headphones.									
Wow and Flutter:	NAB: (USA, Canada, PX Model) 0.05 % at 19 cm/s (7½ ips) 0.09 % at 9.5 cm/s (3½ ips) WRMS	Dimensions: 458 (w) x 425 (h) x 213 (d) mm 18 1/8 (w) x 16 3/4 (h) x 8 1/2 (d) inches including projecting parts and controls									
DIN: (PX Model)	±0.09 % at 19 cm/s (7½ ips) ±0.12 % at 9.5 cm/s (3½ ips)	Weight: 20.8 kg (45 lb 14 oz)									

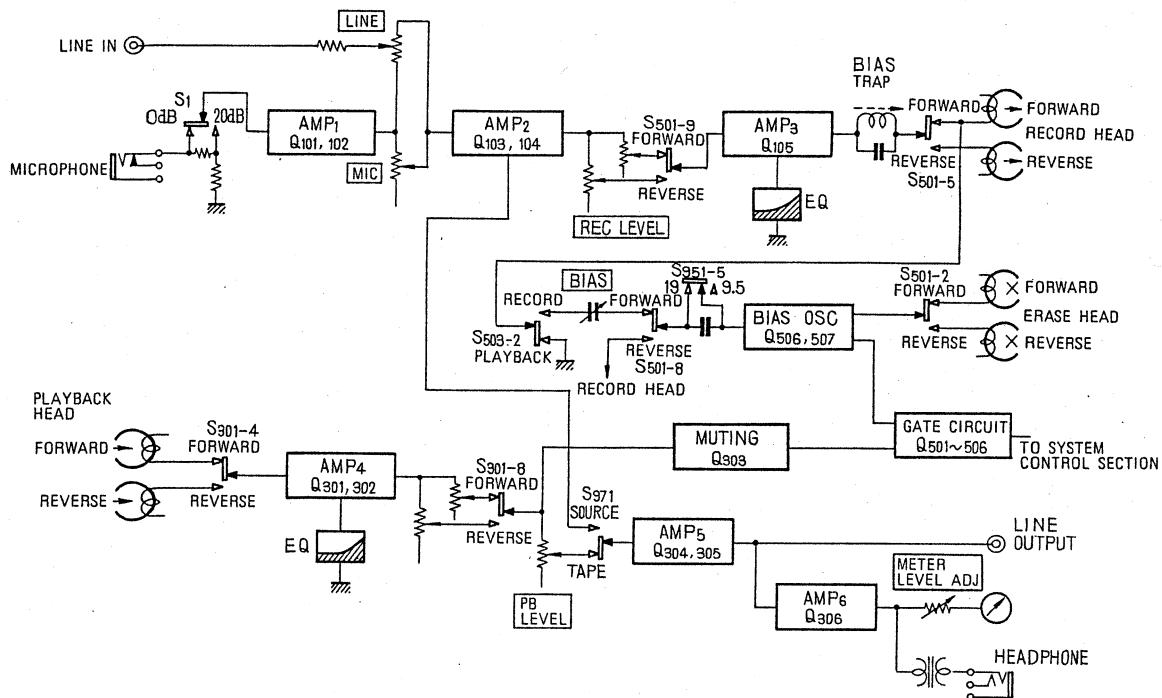
SONY®
SERVICE MANUAL

SECTION 1

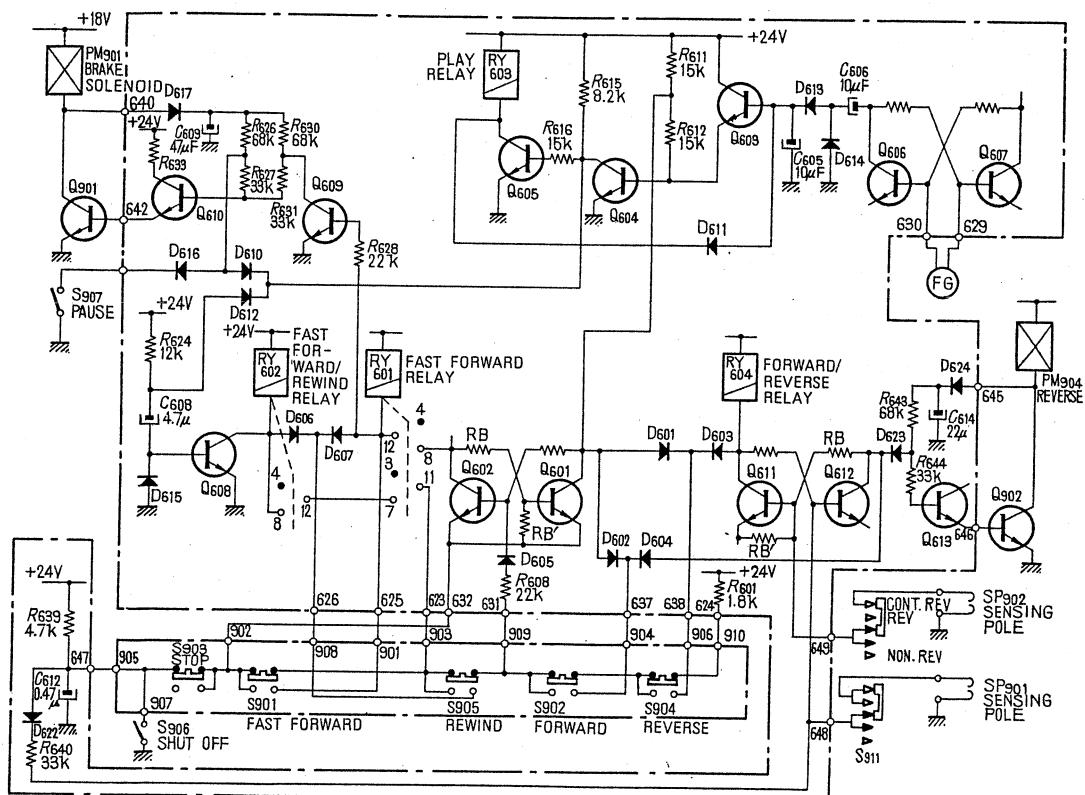
OUTLINE

1-1. BLOCK DIAGRAM

— Amp Section —

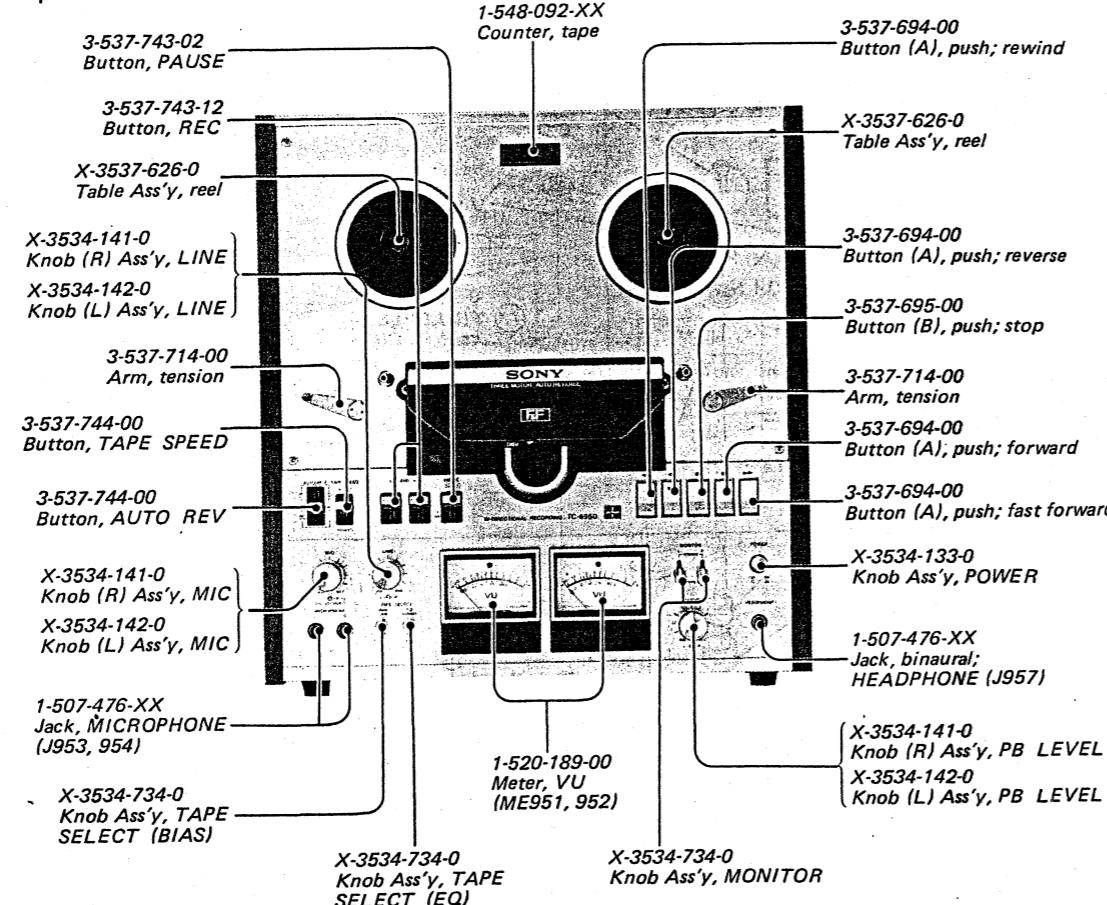


– System Control Section –

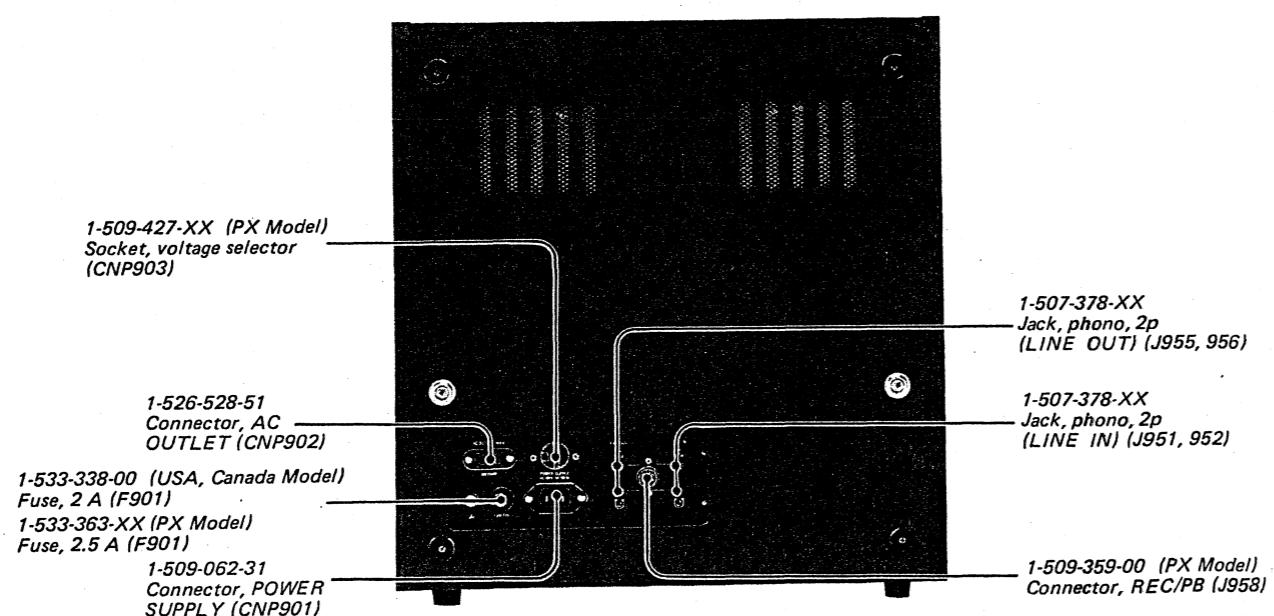


1-2. EXTERNAL VIEWS

- Top View -

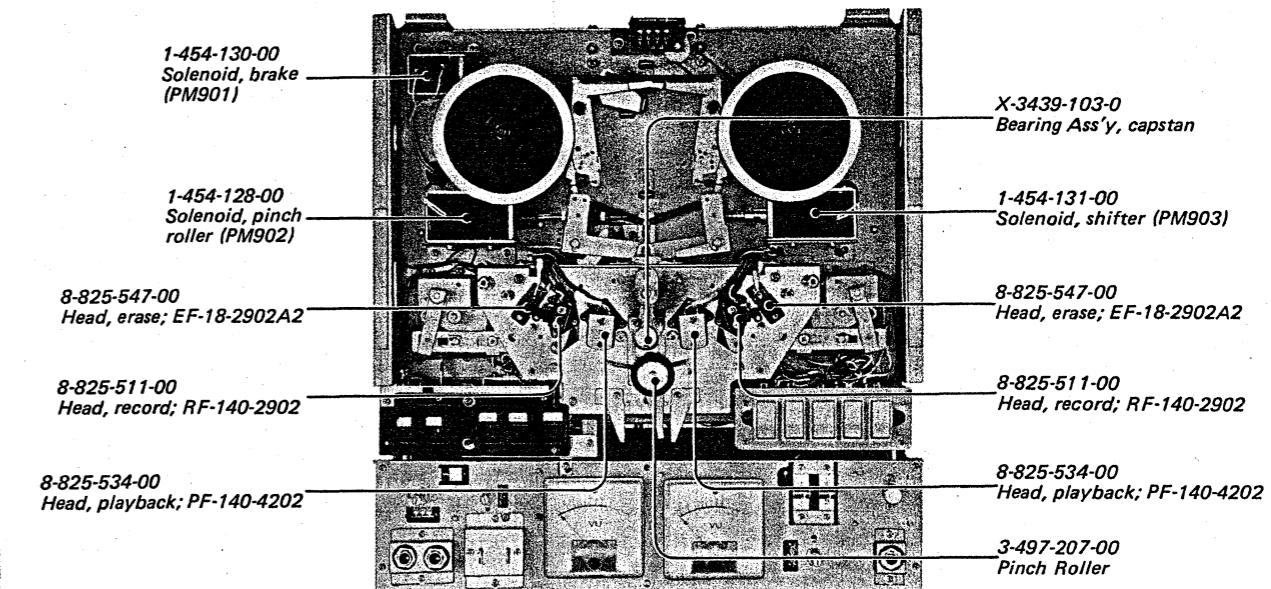


- Bottom View -

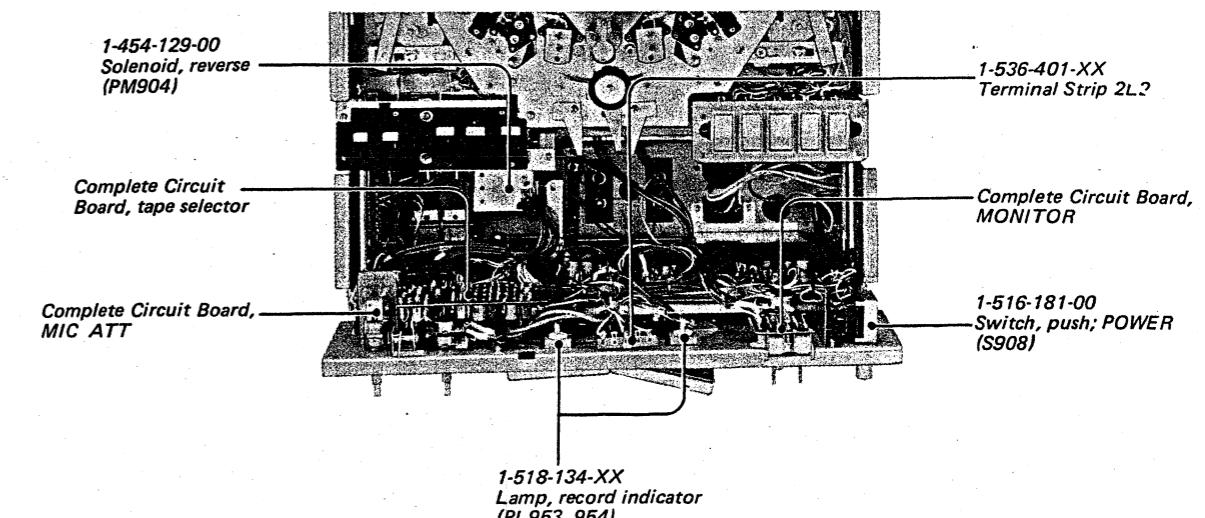


1-3. INTERNAL VIEWS

- Top View (1) -



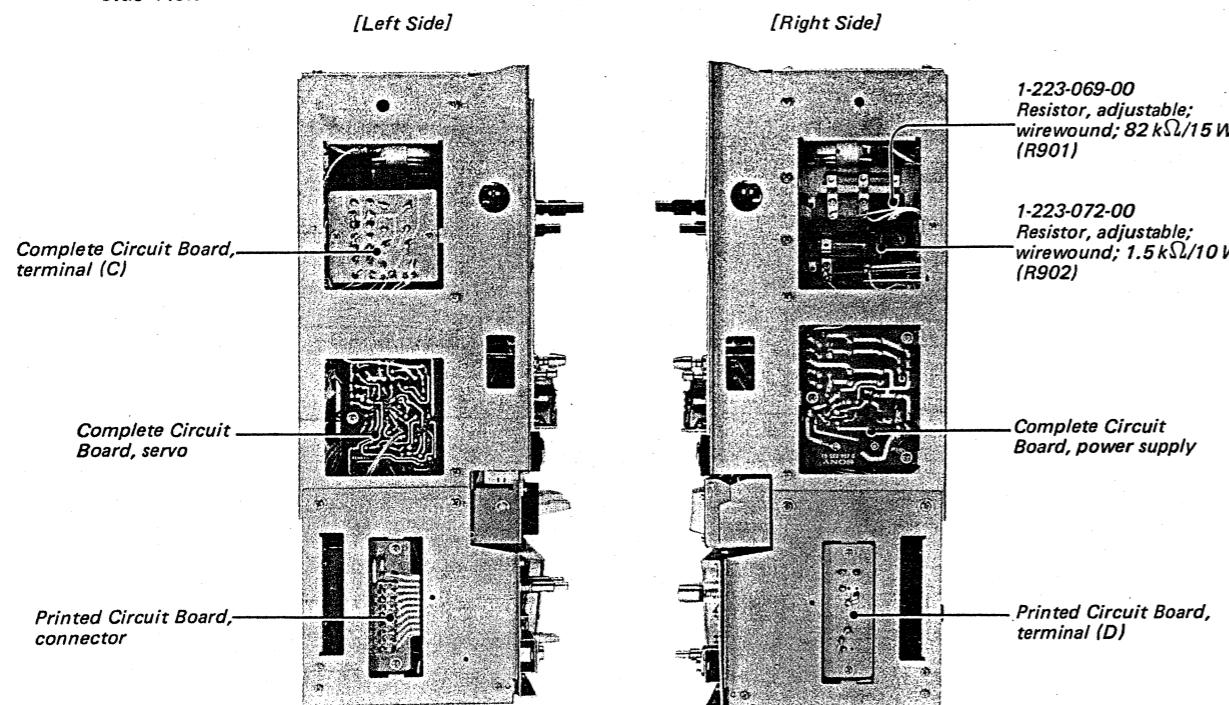
- Top View (2) -



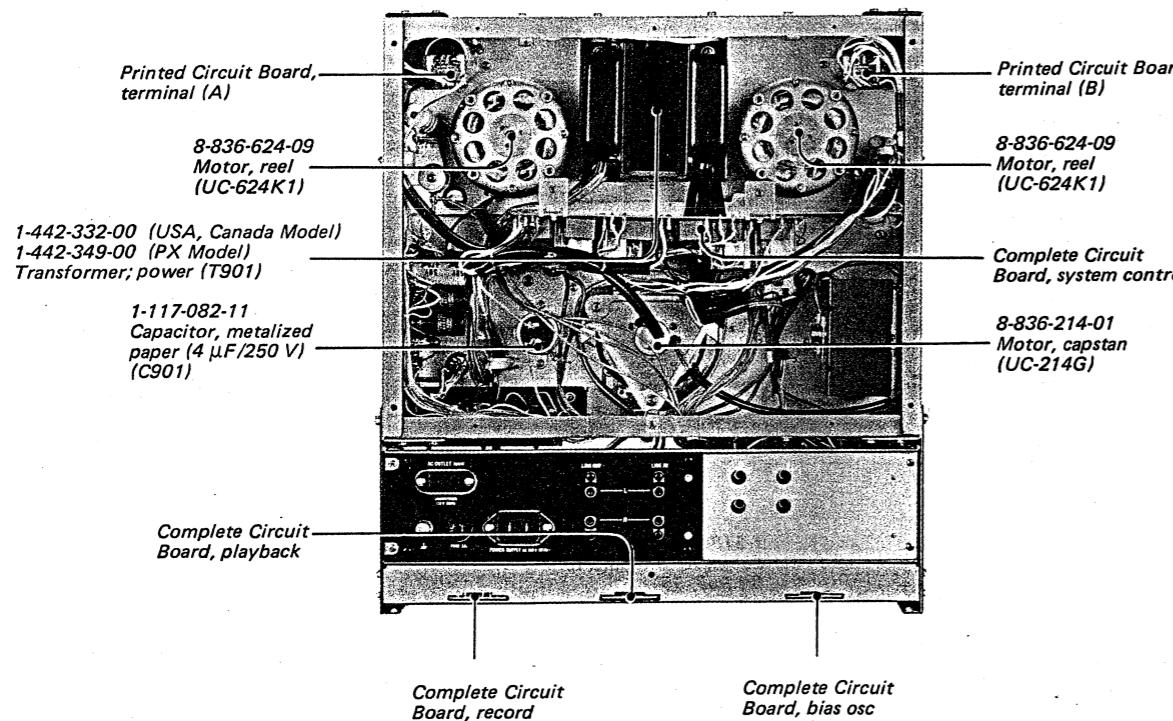
SECTION 2

DISASSEMBLY

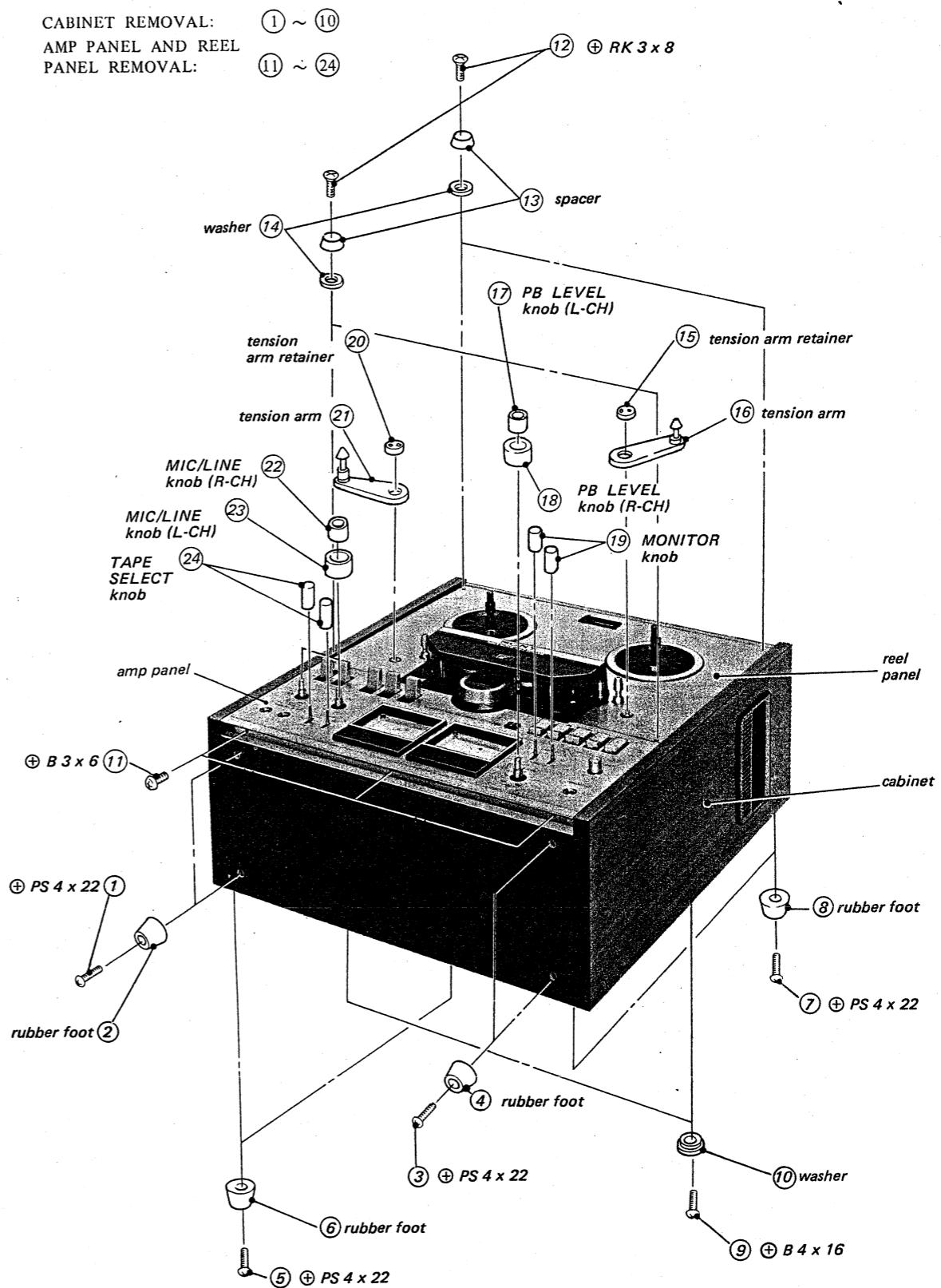
— Side View —



— Bottom View —

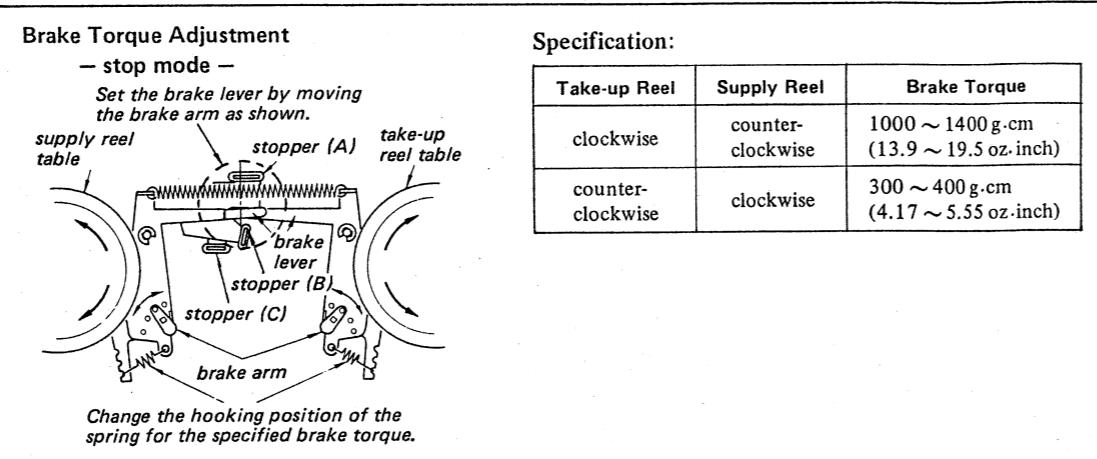


CABINET REMOVAL:
AMP PANEL AND REEL
PANEL REMOVAL:



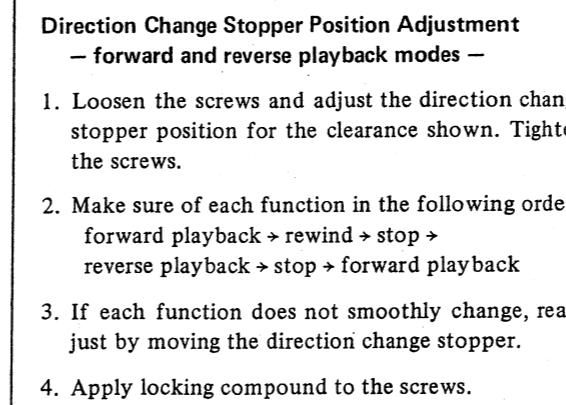
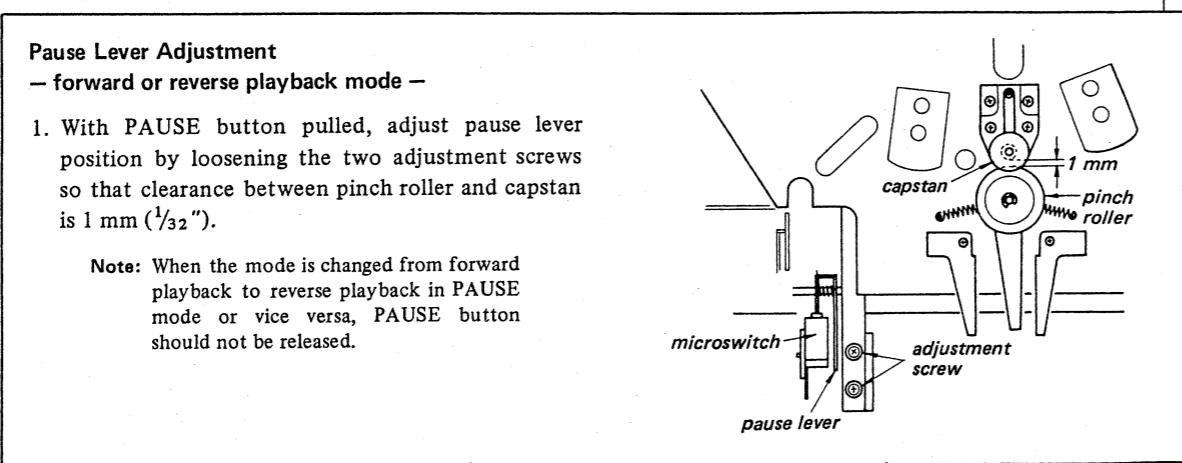
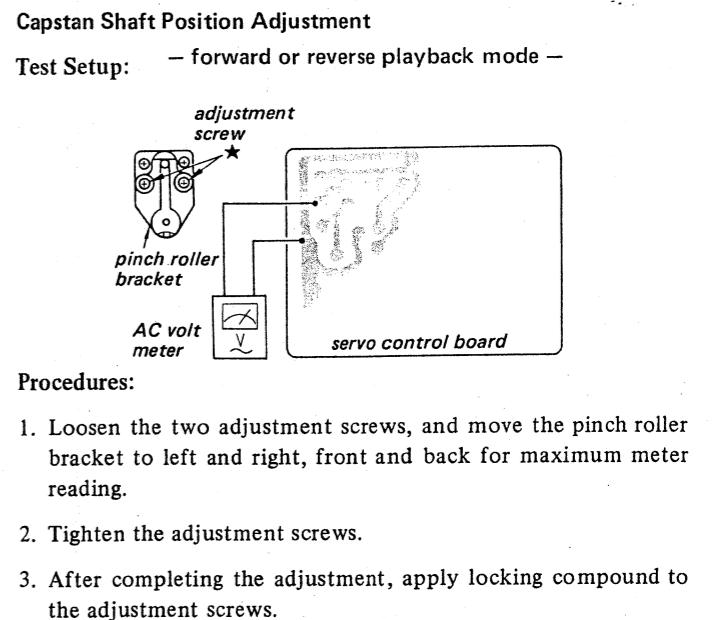
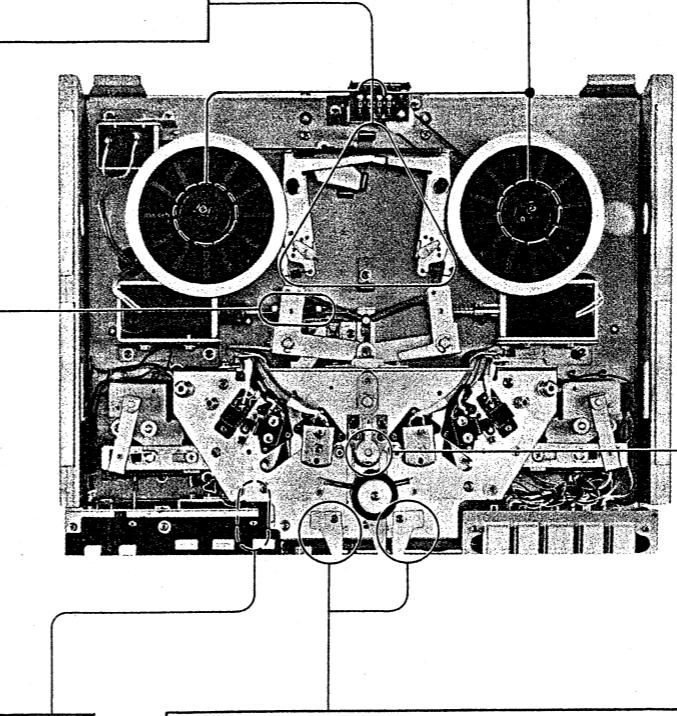
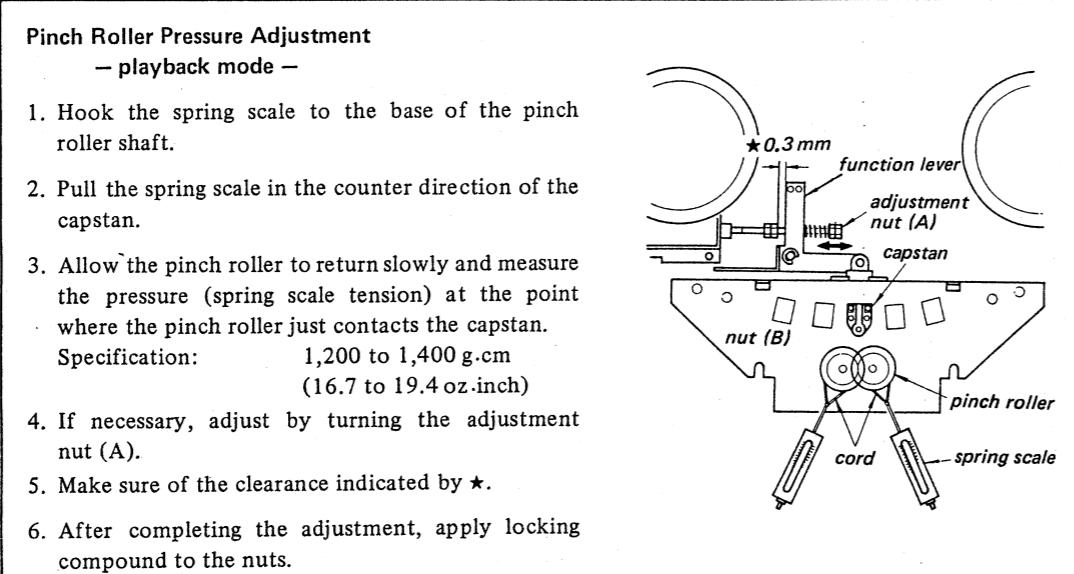
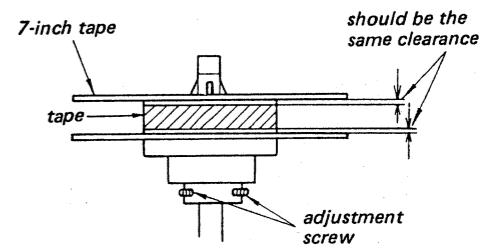
SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS



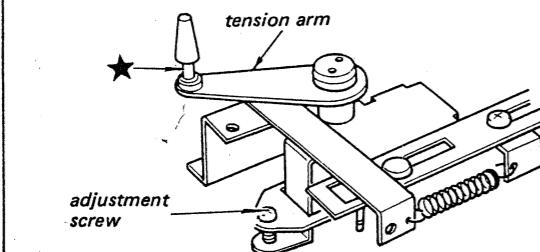
Reel Table Height Adjustment

- Thread a 7-inch tape.
- Make sure that the tape does not touch the reel flanges in forward playback, reverse playback, fast forward and rewind modes.
- If the tape touches the reel flanges, adjust the reel table height by loosening the two adjustment screws.

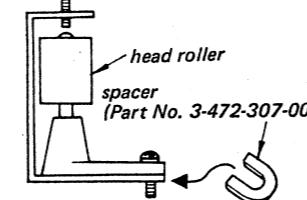


Tape Pass Adjustment**a). Tape Guide Adjustment**

- Thread the tape, and set the TAPE SPEED switch to "19 cm".
- Make sure that the tape is correctly running in forward and reverse playback mode.
- Make sure that the tape does not curl at the portions indicated by ★.
- If necessary, adjust the tape guides (B), (C) and (D) relative to the tape guide (A).
- Adjust the both tension arm heights by turning the adjustment screws.

**b). Pinch Roller Check**

- Thread a 7-inch tape, and set the TAPE SPEED switch to "19 cm".
- Make sure that the beginning portion of tape is correctly running, and does not move up and down on the both tape guides near the pinch roller.
- c). Head Roller Adjustment**
- Thread a 7-inch tape, and run the tape in forward and reverse playback mode.
- Make sure that the head roller is rotating, and hold the head roller by fingers.
- Make sure that the head roller starts rotating again, when taking off fingers from the head roller.
- Make sure that the tape is not wavy at the head roller.
- If necessary, adjust the angle of head roller by using the spacer as shown.

**d). Adjustments after Playback and Record Head Replacement**

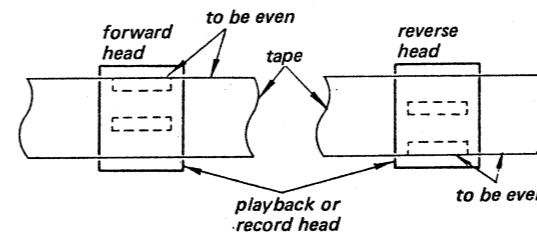
Note: When replacement of both playback and record heads is required, leave one of them unremoved for the reference of adjustments. After one head has been replaced and adjusted, replace the other head. Do not remove all the heads at the same time.

Settings:

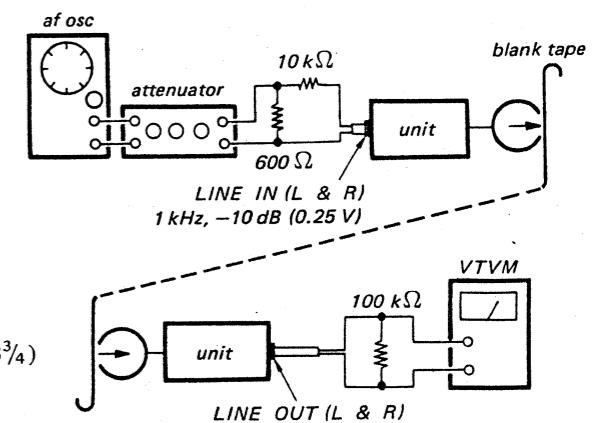
TAPE SELECT switch: BIAS → LOW
EQ → NORMAL
MONITOR switch: TAPE
TAPE SPEED switch: 19 cm or 9.5 cm (7½ or 3¾)
PB LEVEL control: mechanical mid
LINE control: normal position
(See page 10.)

Procedure:

- Thread a tape, and by turning head zenith and head height adjustment screws, adjust the head height as shown.

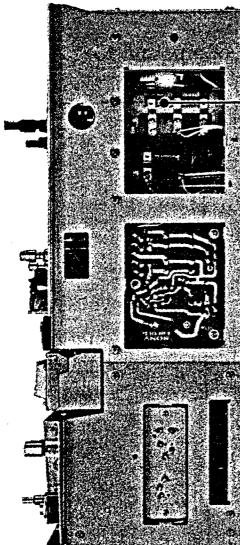
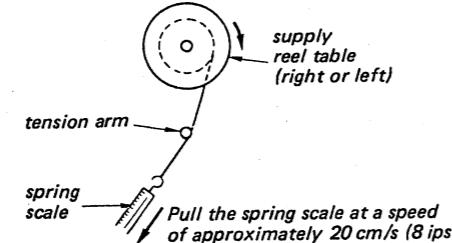


- Mode: record
MONITOR switch: TAPE



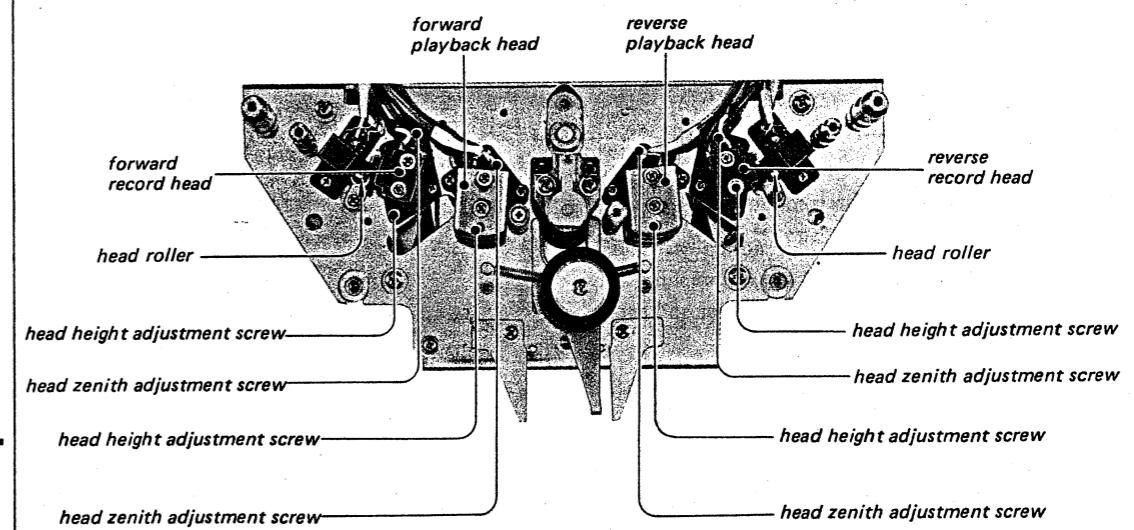
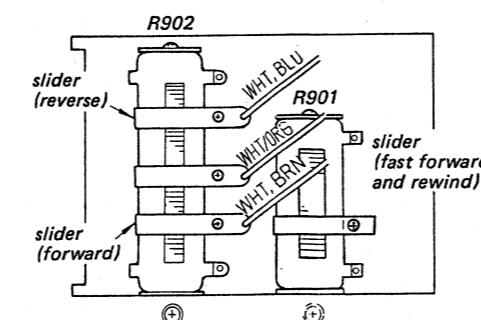
Adjust the head zenith and head height adjustment screws for maximum reading on the VTVM.

- Perform the playback head azimuth and phase adjustments on Page 13 or the record head azimuth adjustment on Page 15.
- After completing the adjustment, apply locking compound to the adjustment screws.

**Back Tension Torque Adjustment****1. Measurement****Specifications:**

Mode	Back Tension Torque
fast forward, rewind	40 ~ 50 g·cm (0.55 ~ 0.7 oz·inch)
forward, reverse playback	200 ~ 240 g·cm (2.78 ~ 3.34 oz·inch)

- If necessary, adjust the torque by moving the slider of R901 and R902.



3-2. ELECTRICAL ADJUSTMENTS

Precaution:

1. Clean the following parts with a swab moistened with alcohol:
record heads pinch roller
playback heads rubber belts
erase heads idlers
capstan tape guides
2. Demagnetize record, playback and erase heads with a head demagnetizer.
3. Do not use magnetized screwdriver for adjustments.
4. After adjustments, apply locking compound to the adjusted parts.
5. Adjustments should be performed in the order listed in this service manual.
6. Adjustments and measurements should be performed for each L and R channel with the rated power supply voltage unless otherwise specified.
7. Unless otherwise noted, set controls and switches as follows:

TAPE SELECT switch ... EQ + NORMAL
BIAS + LOW
MONITOR switch TAPE
TAPE SPEED switch 19 cm (7½)
MIC ATT switch OFF
AUTO REV switch NON REV

Test Equipment/Tools Required:

audio oscillator (af osc)
VOM
attenuator (600 Ω)
digital frequency counter
or speed checker (SONY LFM-30)
resistors:
600 Ω, 10 kΩ, 100 kΩ
SONY test tapes:
1). J-19-F2

Tone:	1	2	3	4	5	6	7
Frequency:	400	400	10 k	12.5 k	7 k	80	40
(Hz)							
Level (dB):	0	-10	-10	-10	-10	-10	-10

2). SPC-47 (4 kHz, 0 dB)
blank tape (completely erased):
SLH-S1

Normal Input Level

	Impedance	Level
LINE IN	10 kΩ	-10 dB (0.25 V)

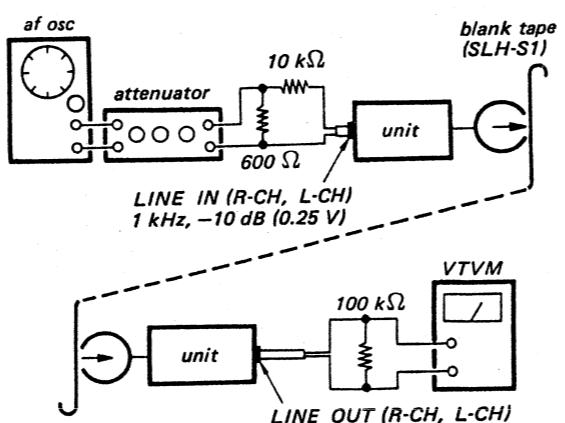
Normal Output Level

	Load Impedance	Level
LINE OUT	100 kΩ	-5 dB (0.44 V)

Normal LINE control setting:

MIC control: MIN
PB LEVEL control: mechanical mid
TAPE SELECT switch:EQ + SLH
BIAS + LOW
MONITOR switch: TAPE

Mode: record

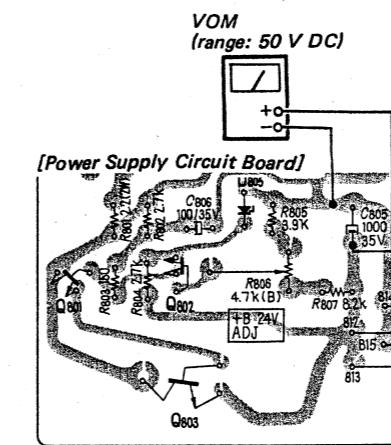


Adjust LINE control for -5 dB (0.44 V) reading on the VTVM.

1. 24 V B+ Adjustment

Procedure:

Mode: stop



Adjust R806 for 24 V reading on the VOM.

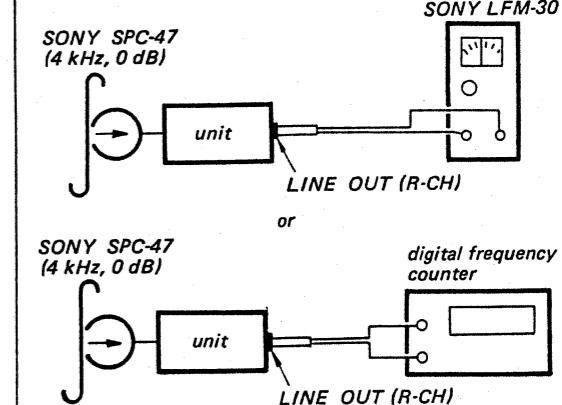
2. Tape Speed Adjustment

Settings:

TAPE SPEED switch: 19 cm and 9.5 cm (7½ and 3¾)

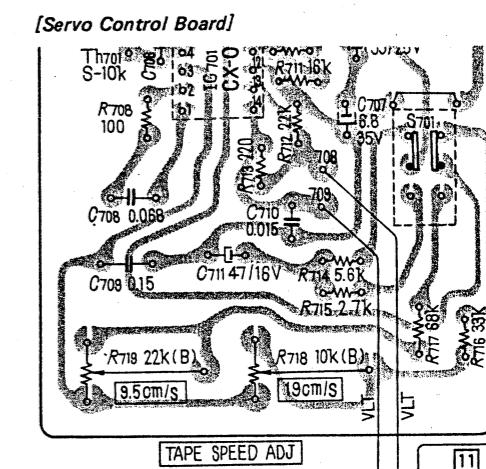
Procedure:

1. Mode: playback



TAPE SPEED	Adjust	Specification	
		speed checker	digital frequency counter
19 cm, 7½	R718	-1 ~ +1 %	3,960 ~ 4,040 Hz
9.5 cm, 3¾	R719	-1 ~ +1 %	1,980 ~ 2,020 Hz

Adjustment Location:



3. Playback Head Azimuth and Phase Adjustments

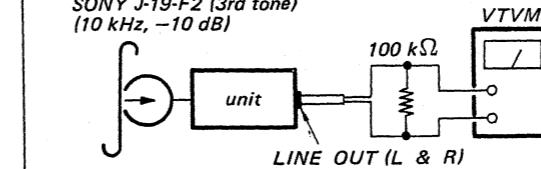
Settings:

TAPE SPEED switch: 19 cm ($7\frac{1}{2}$)

Procedure:

1. Mode: playback

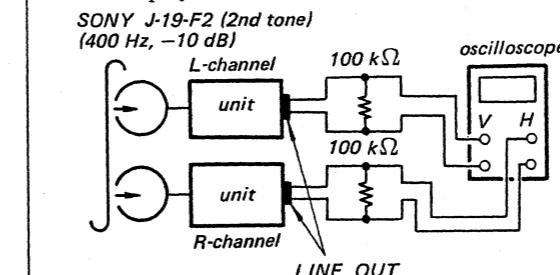
SONY J-19-F2 (3rd tone)
(10 kHz, -10 dB)



Turn the adjustment screw for the highest reading on the VTVM.

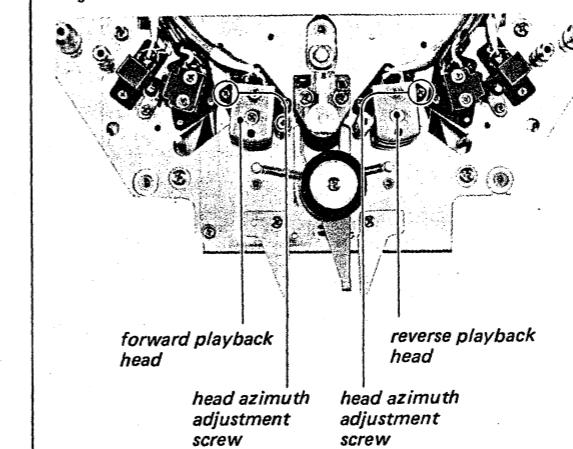
Note: If the highest peak readings at L-CH and R-CH cannot be obtained at the same screw position, take the midway between the both positions of the screw.

2. Mode: playback



Adjust	On the oscilloscope			
azimuth adjustment screw	in-phase	30°	90°	more than 90°
	good			wrong

Adjustment Location:

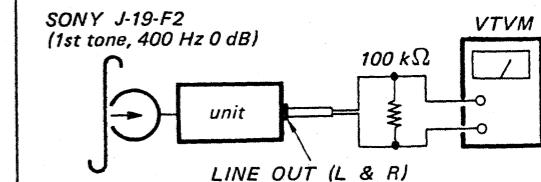


4. Playback Level Adjustment

Procedure:

1. Mode: playback

SONY J-19-F2
(1st tone, 400 Hz 0 dB)



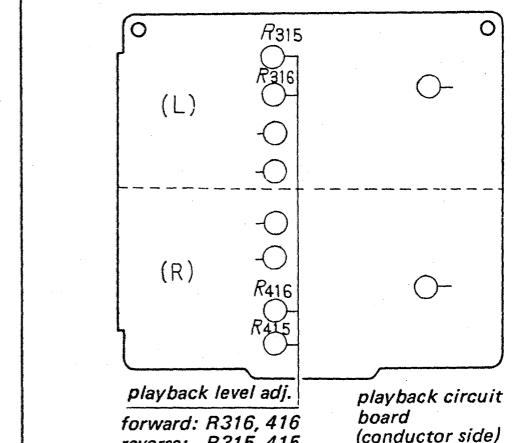
TAPE SELECT (EQ) switch: NORMAL

Mode	Adjust	VTVM reading
forward playback	R316 (L-CH) R416 (R-CH)	-5.5 dB ~ -4.5 dB (0.41 V ~ 0.45 V)
reverse playback	R315 (L-CH) R415 (R-CH)	

TAPE SELECT (EQ) switch: SPECIAL

Mode	Adjust	VTVM reading
forward playback	R316 (L-CH) R416 (R-CH)	-8 dB ~ -7 dB (0.31 V ~ 0.35 V)
reverse playback	R315 (L-CH) R415 (R-CH)	

Adjustment Location:

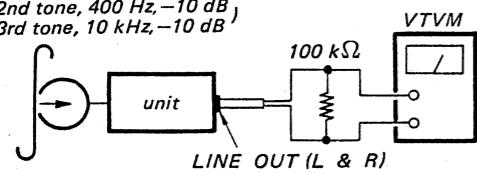


5. Playback Equalizer Adjustment**Settings:**

TAPE SELECT (EQ) switch: SPECIAL

Procedure:

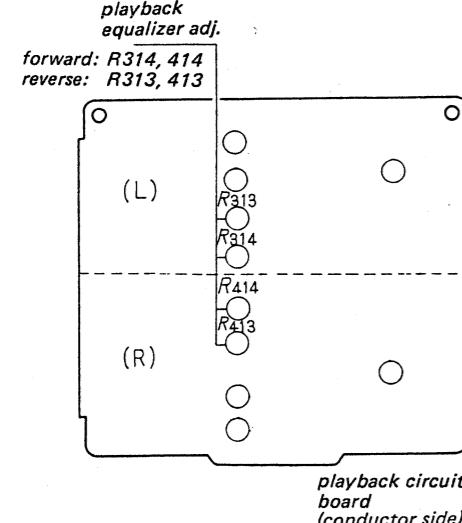
Mode: playback
SONY J-19-F2
 (2nd tone, 400 Hz, -10 dB)
 (3rd tone, 10 kHz, -10 dB)



Mode	Adjust	Remarks
forward playback	R314 (L-CH) R414 (R-CH)	
reverse playback	R313 (L-CH) R413 (R-CH)	Adjust so that 10 kHz level is the same as 400 Hz.

Specification:

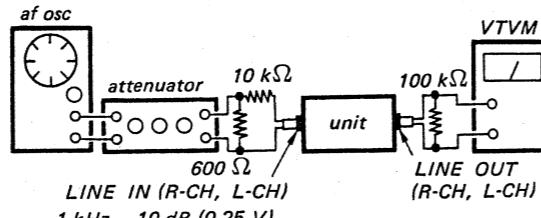
J-19-F2		Level Difference from 2nd tone (400 Hz)
Tone	Frequency	
2 nd	400 Hz	0 dB (reference)
3 rd	10 kHz	0 ± 2 dB
4 th	12.5 kHz	0 ± 2 dB
5 th	7 kHz	0 ± 2 dB
6 th	80 Hz	+1 ± 2.5 dB
7 th	40 Hz	+3 ± 2.5 dB

Adjustment Location:**6. Level Meter Calibration****Settings:**

MONITOR switch: SOURCE
 PB LEVEL control: mechanical mid

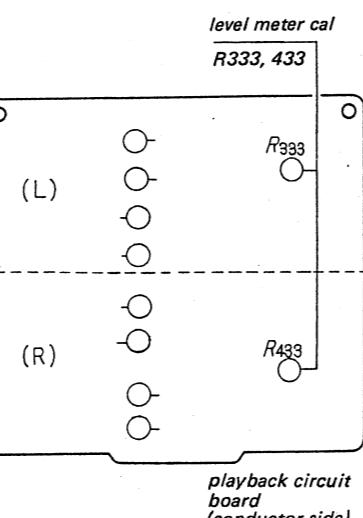
Procedure:

1. Mode: record



2. Adjust LINE IN control for -5 dB (0.44 V) reading on the VTVM.
3. Calibrate the level meters for "0" indication.

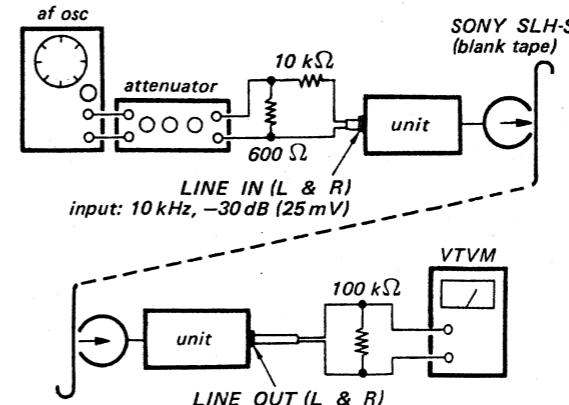
Adjust	Level Meter Reading
R333 (L-CH)	"0" VU
R433 (R-CH)	

Adjustment Location:**7. Record Head Azimuth Adjustment****Settings:**

TAPE SELECT (EQ) switch: SPECIAL
 TAPE SELECT (BIAS) switch: LOW
 LINE control: normal setting on page 11

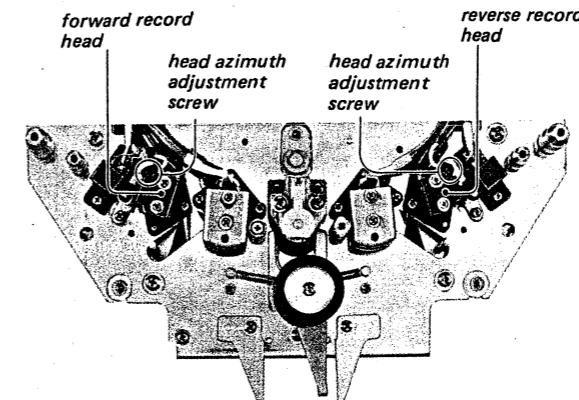
Procedure:

1. Mode: record



Turn the adjustment screw for the highest reading on the VTVM.

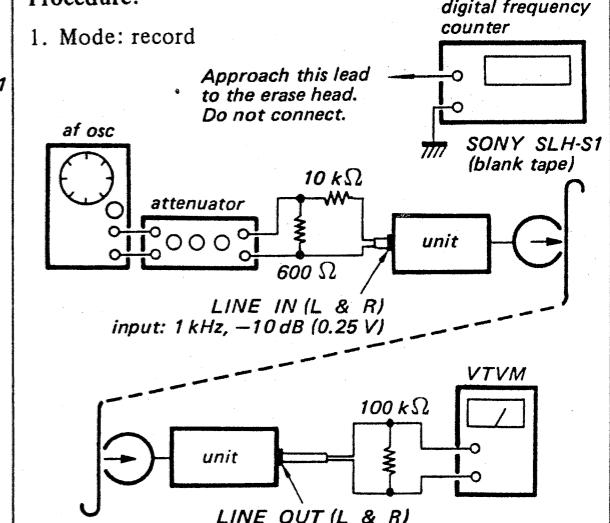
Note: If the highest peak readings at L-CH and R-CH cannot be obtained at the same screw position, take the midway between the both positions of the screw.

Adjustment Location:**8. Record Bias and Bias Frequency Adjustment****Settings:**

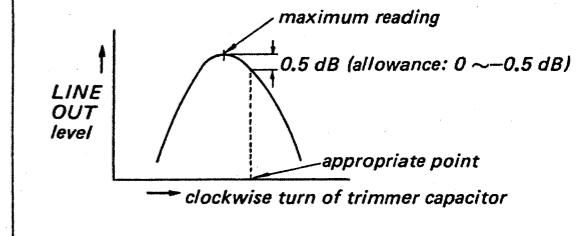
TAPE SELECT (EQ) switch: SPECIAL
 TAPE SELECT (BIAS) switch: LOW
 LINE control: normal setting on page 11

Procedure:

1. Mode: record

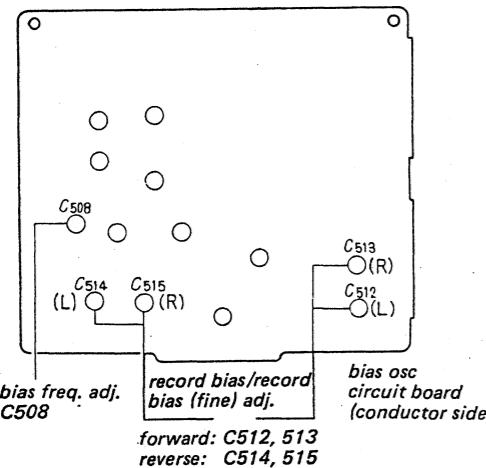


Mode	Adjust	Remarks
forward record	trimmer capacitor C512 (L-CH) C513 (R-CH)	Slowly turn the trimmer capacitor clockwise until VTVM reads 0.5 dB below and beyond the maximum reading as shown.
reverse record	trimmer capacitor C514 (L-CH) C515 (R-CH)	



- In forward record mode, be sure that the frequency counter reading is as specified.
 Specification: 160 ± 3 kHz
- In reverse record mode, adjust the trimmer capacitor C508 until VTVM reads the same frequency as step 2.

Adjustment Location: See Fig. A. on next page.

Adjustment Location:**Fig. A.** Record bias and frequency, record bias fine adjustment location**9. Record Bias Fine Adjustment**

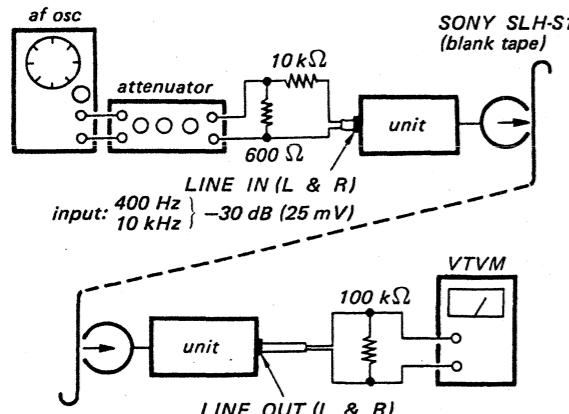
Note: Perform this adjustment after the record bias and bias frequency adjustment.

Settings:

TAPE SELECT (EQ) switch: SPECIAL
LINE control: normal setting on page 11

Procedure:

1. Mode: record



Mode	Frequency	Adjust	Remarks
forward record	400 Hz	trimmer capacitor C512 (L-CH)	Adjust so that 10 kHz level is the same as 400 Hz.
	10 kHz	C513 (R-CH)	
reverse record	400 Hz	trimmer capacitor C514 (L-CH)	
	10 kHz	C515 (R-CH)	

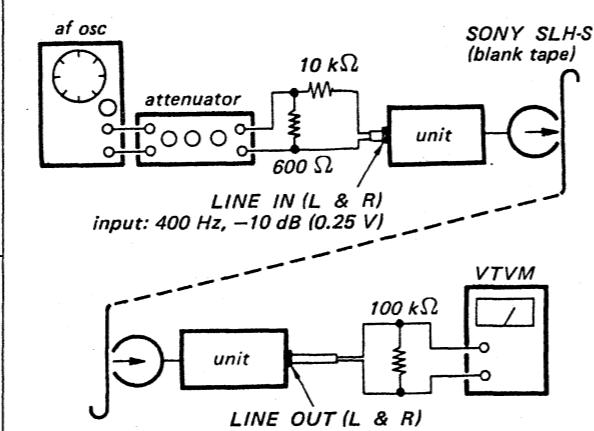
Adjustment Location: See Fig. A above.**10. Record Level Adjustment****Settings:**

SPEED SELECT switch: 19 cm and 9.5 cm (7½ and 3¾)

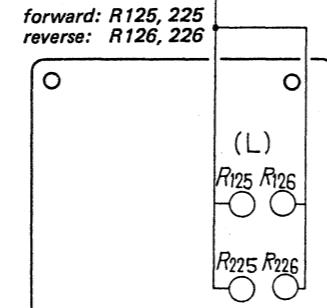
TAPE SELECT (EQ) switch: SPECIAL
LINE control: normal setting on page 11

Procedure:

1. Mode: record



Mode	Tape Speed	Adjust	VTVM Reading
forward record	19 cm/s (7½)	R125 (L-CH) R225 (R-CH)	-5 dB±0.5 dB (0.41~0.45 V)
	9.5 cm/s (3¾)		-5 dB±2 dB (0.35~0.55 V)
reverse record	19 cm/s (7½)	R126 (L-CH) R226 (R-CH)	-5 dB±0.5 dB (0.41~0.45 V)
	9.5 cm/s (3¾)		-5 dB±2 dB (0.35~0.55 V)

Adjustment Location:*record level adj.*

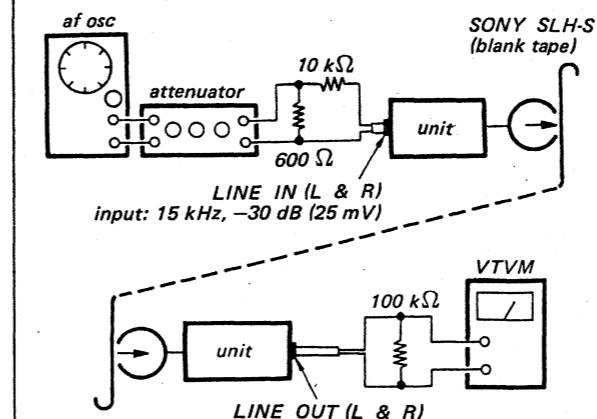
record circuit board (conductor side)

11. Dummy Coil Adjustment**Settings:**

TAPE SELECT (EQ) switch: SPECIAL
LINE control: normal setting on page 11

Procedure:

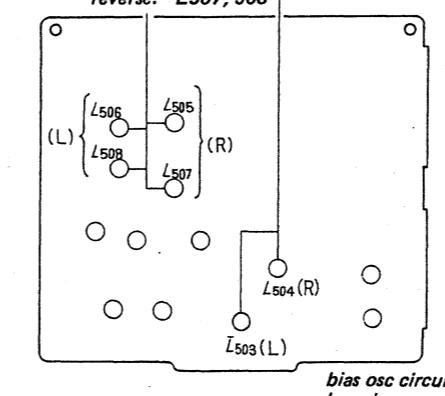
1. Mode: record



Step	Mode	Adjust	VTVM Reading
1	stereo record	—	Memorize
2	R channel record forward: reverse:	L506 L508	R-ch: same as in stereo record mode
3	L channel record forward: reverse:	L505 L507	L-ch: same as in stereo record mode

Adjustment Location:

*dummy coil adj.
forward: L505, 506
reverse: L507, 508*



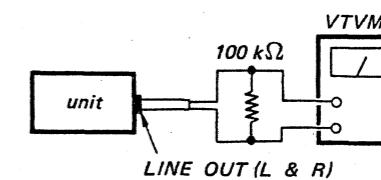
bias osc circuit board (conductor side)

12. Bias Trap Adjustment**Settings:**

MONITOR switch: SOURCE

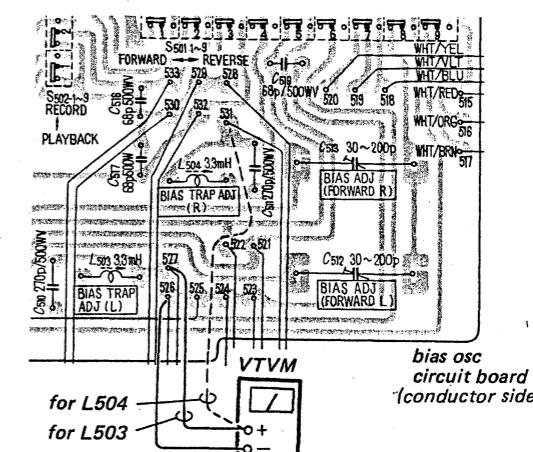
Procedure:

1. Mode: forward stereo record



Be sure that the VTVM reading is less than -40 dB (7.7 mV).

2. Test Setup (forward stereo record mode).

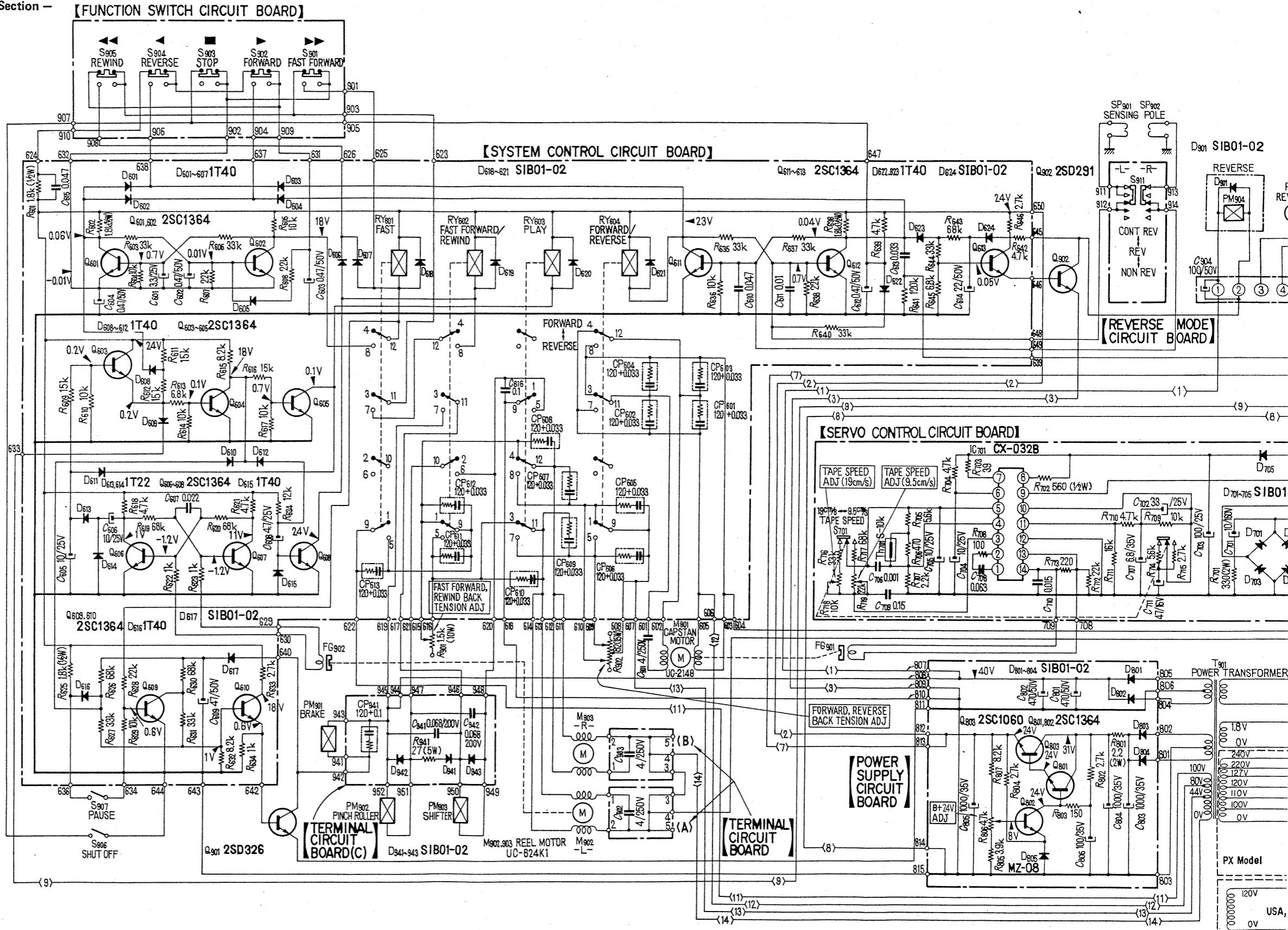


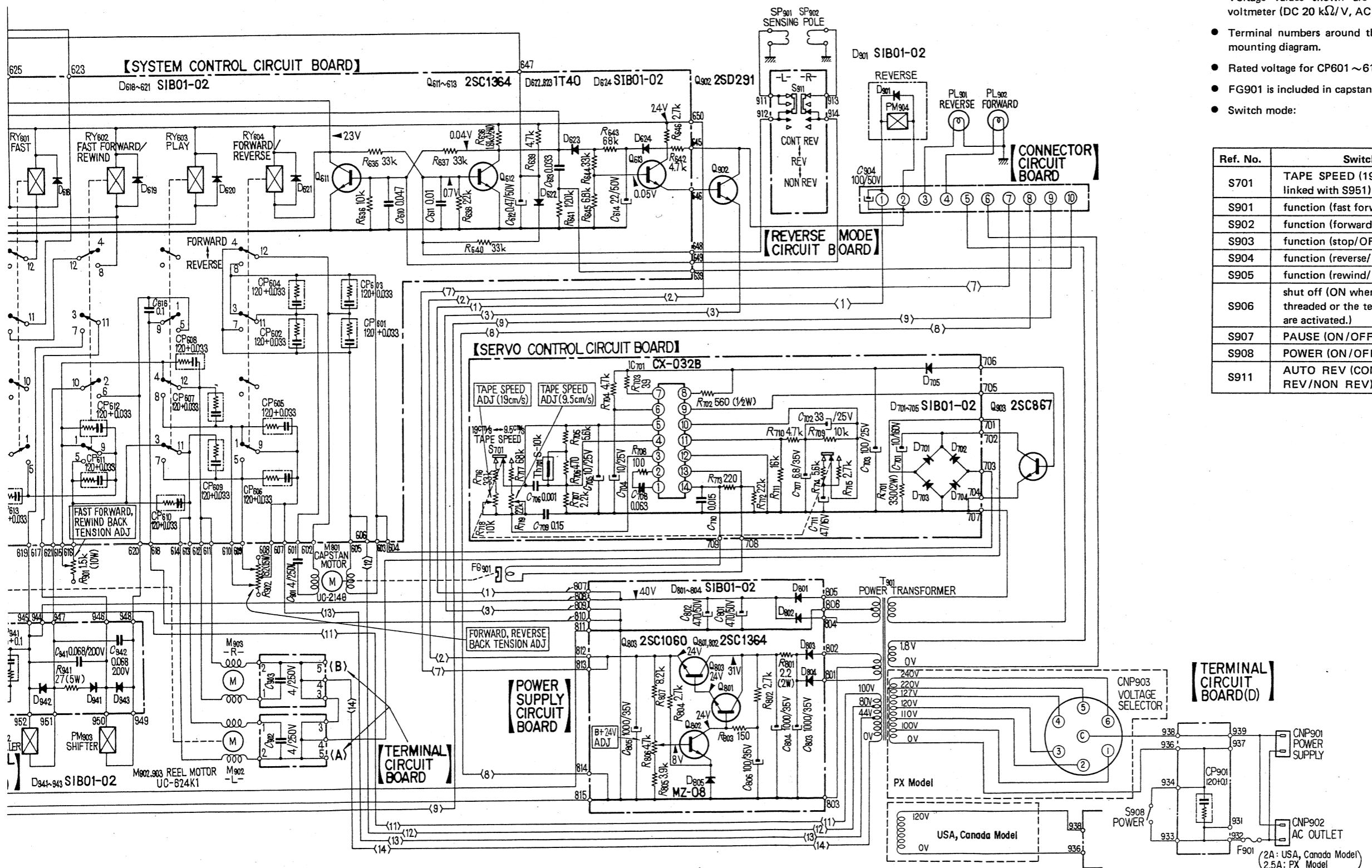
Adjust	VTVM reading
L503	minimum
L504	minimum

Adjustment Location: See Fig. B on the left.**Fig. B.** Dummy coil and bias trap adjustment location

SECTION 4
DIAGRAMS

4-1. SCHEMATIC DIAGRAM – System Control Section –





Note:

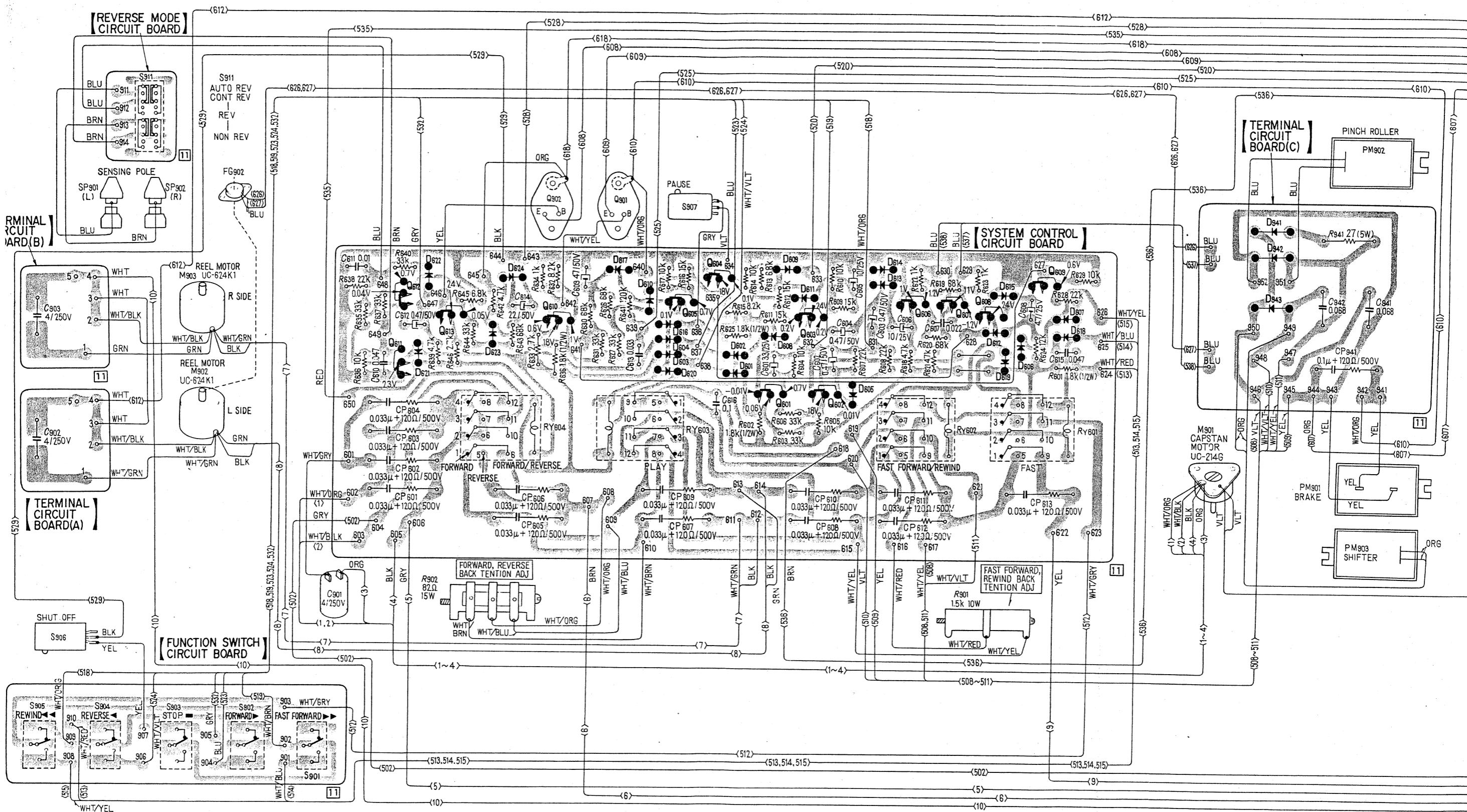
- All resistors are in Ω , $\frac{1}{4}$ W, and carbon type unless otherwise indicated. ($k = 1000$)
- All capacitors are in μF unless otherwise indicated. ($p = \mu\mu$)
- Voltage values shown are measured to chassis ground with a voltmeter (DC 20 k Ω /V, AC 8 k Ω /V) in forward mode.
- Terminal numbers around the circuit boards are equivalent to the mounting diagram.
- Rated voltage for CP601 ~ 613 and CP941 is 500 V.
- FG901 is included in capstan motor (M901).
- Switch mode:

Ref. No.	Switch	Mode
S701	TAPE SPEED (19 cm/9.5 cm, linked with S951)	19 cm
S901	function (fast forward/OFF)	OFF
S902	function (forward/OFF)	OFF
S903	function (stop/OFF)	OFF
S904	function (reverse/OFF)	OFF
S905	function (rewind/OFF)	OFF
S906	shut off (ON when the tape is threaded or the tension arms are activated.)	ON
S907	PAUSE (ON/OFF)	OFF
S908	POWER (ON/OFF)	OFF
S911	AUTO REV (CONT REV/REV/NON REV)	CONT REV

4-2. MOUNTING DIAGRAM – System Control Section –

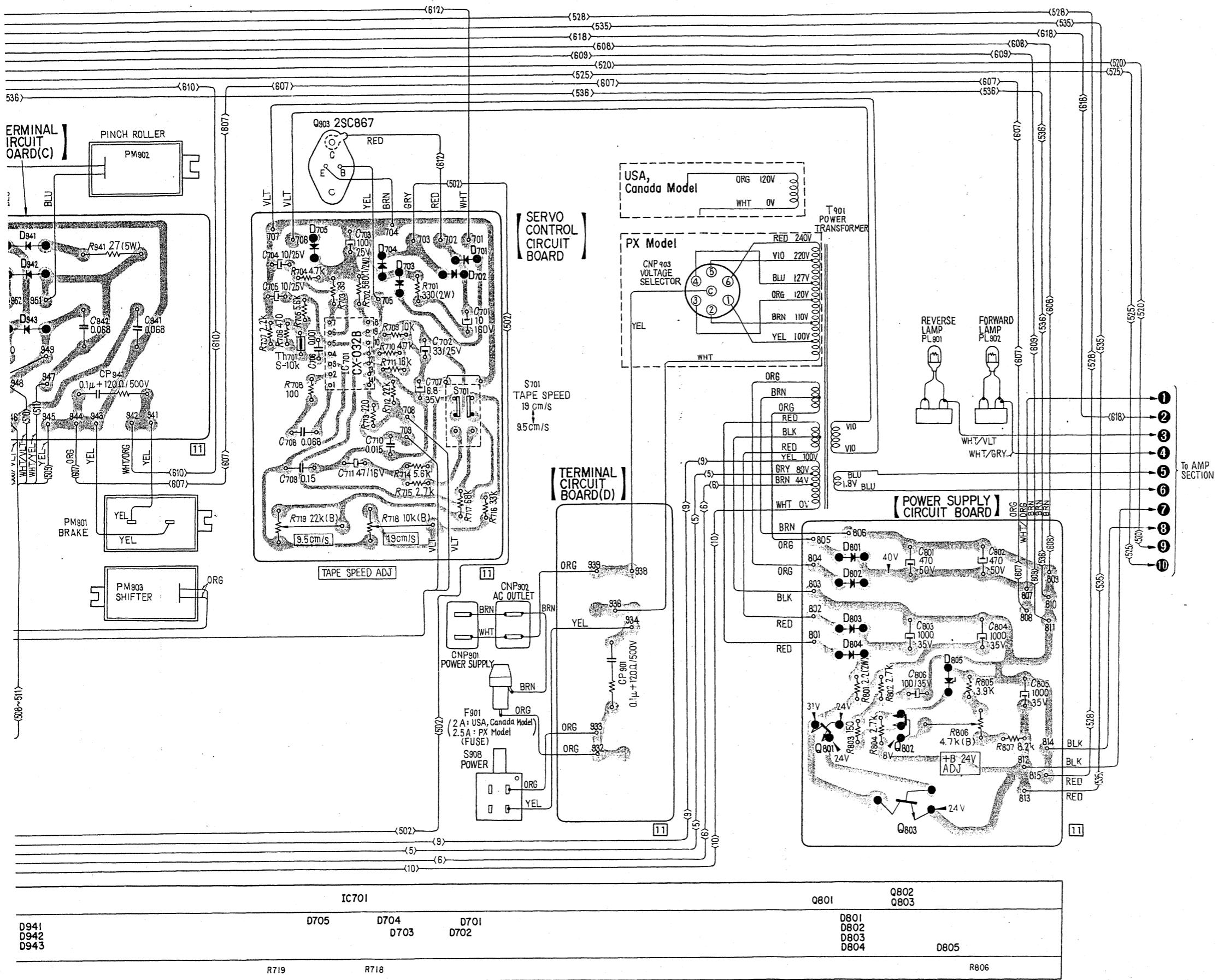
– Conductor Side –

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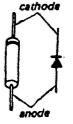


Q, IC	Q612 Q611	Q613	Q610	Q605	Q604	Q601	Q603 Q602	Q606	Q607	Q608	Q609
D			D622 D621	D624 D623	D617 D610	D616 D604 D620	D609 D602 D601	D611 D608	D614 D613	D615 D612 D606 D619	D607 D606 D618
ADJ			R902							R901	

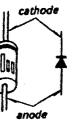
TC-558 **TC-558**



D601 ~ D612, D615 }
D616, D622, D623 } 1T40



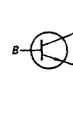
D617, D618 ~ D621, D624
D701 ~ D705, D801 ~ D804
D901, D941 ~ D943



D805: MZ-08



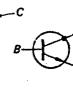
Q601 ~ Q613
Q801, Q802} 2SC1364



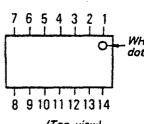
*Q901: 2SD326
Q902: 2SD291
Q903: 2SC867*



Q803: 2SC1060



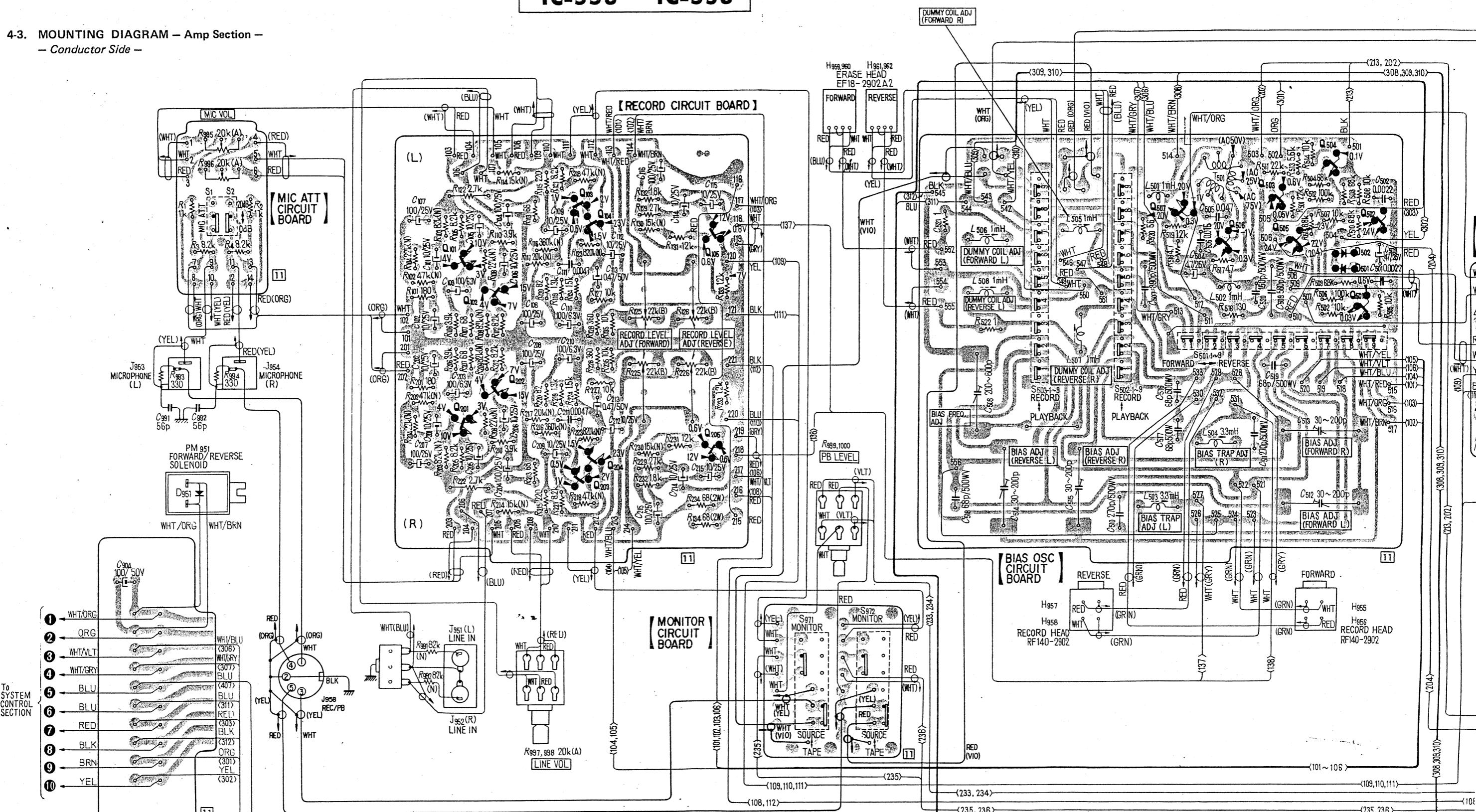
IC701: CX-032B



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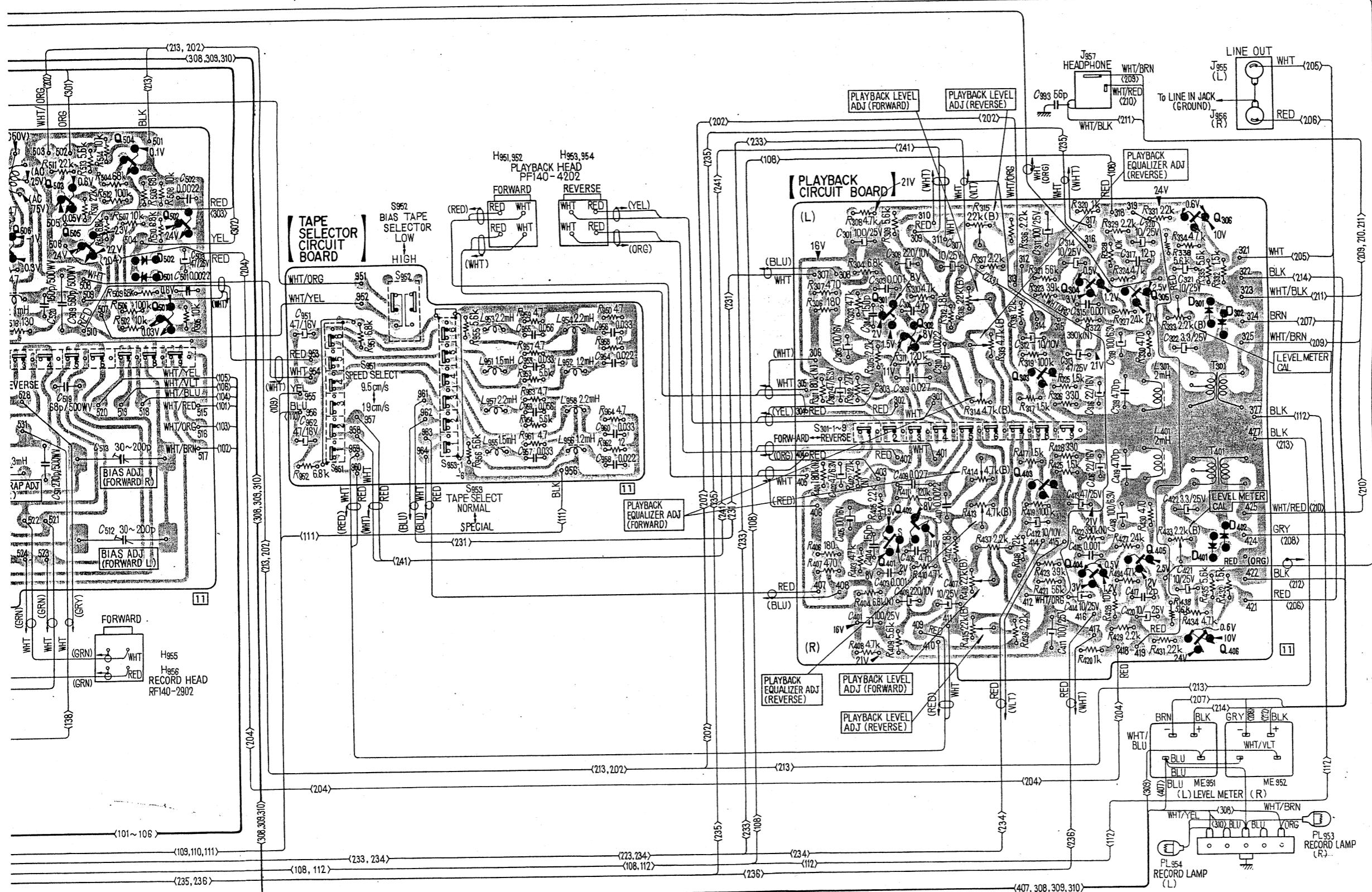
4-3. MOUNTING DIAGRAM – Amp Section –

= Conductor Side =



Q	Q101 Q201	Q102 Q202	Q103 Q203	Q104 Q204	Q105 Q205		Q507	Q506	Q503 Q505	Q504 Q501	Q502
D											D502 D501
ADJ			R215 R225	R126 R226		L506 L508 C508 L514	L505 L507 L503 C515	L504		C513 C512	

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Q301 Q302 Q303 Q304 Q305 Q306
Q401 Q402 Q403 Q404 Q405 Q406

R3
R316
R4
R416 R4
R415 R4

D401 D402

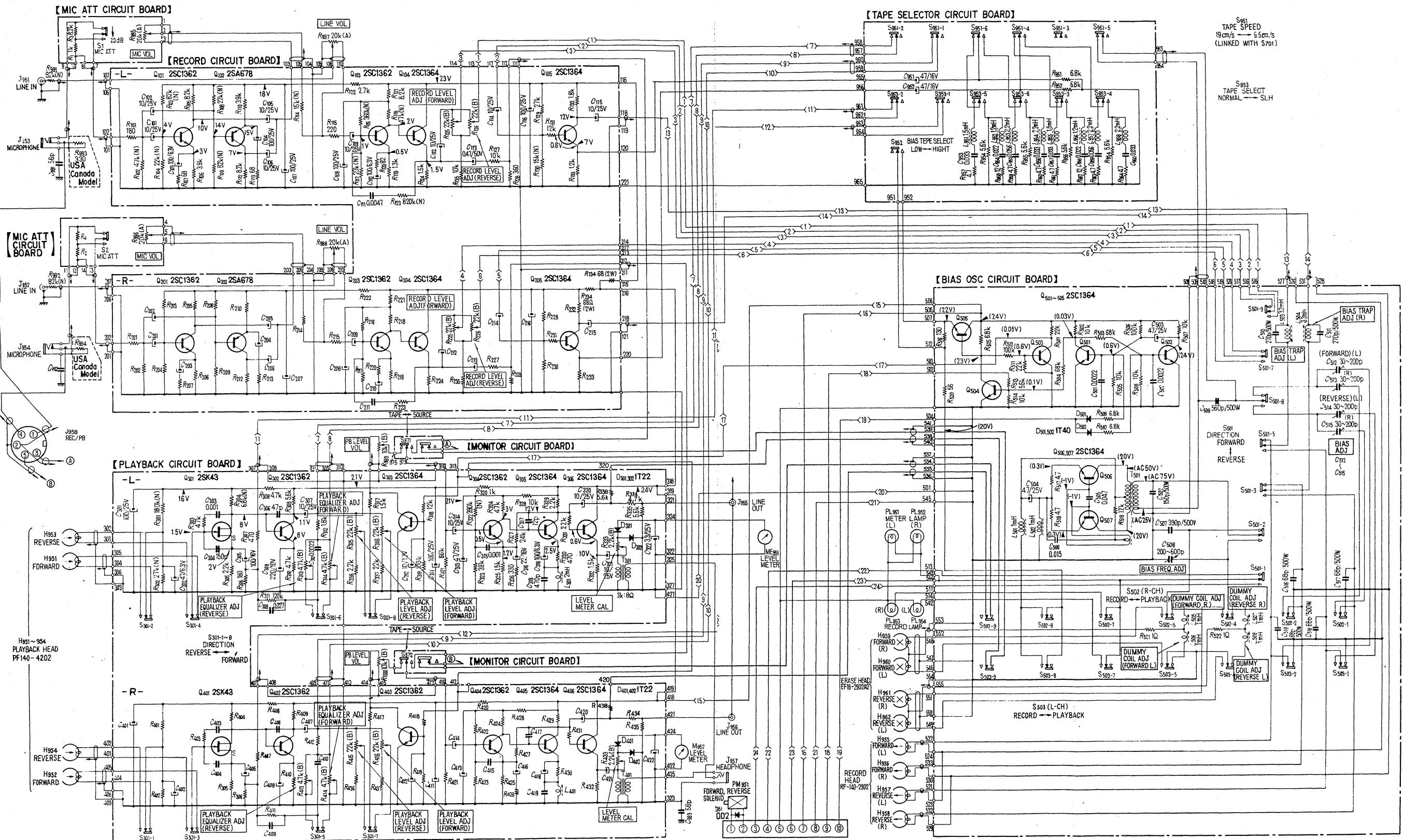
The portions indicated by RED show
PX Model only.

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C5I
C5I

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4-4. SCHEMATIC DIAGRAM - Amp Section -



The portions indicated by RED show
PX Model only.

• Switch mode:

Ref. No.	Switch	Mode
S1.2	MIC ATT (20 dB/OFF)	OFF
S301, 501	direction (forward/reverse)	forward
S502, 503	record/playback	playback
S951	TAPE SPEED (19 cm/9.5 cm, linked with S701)	19 cm
S952	BIAS (TAPE SELECT, LOW/HIGH)	LOW
S953	EQ (TAPE SELECT, NORMAL/SPECIAL)	NORMAL
S971, 972	MONITOR (SOURCE/TAPE)	TAPE

Note: • All resistors are in Ω , $\frac{1}{4}$ W and carbon type unless otherwise indicated. ($k = 1000$)

• All capacitors are in μF unless otherwise indicated. ($p = \mu\mu$)

• Terminal numbers around the circuit boards are equivalent to the mounting diagram.

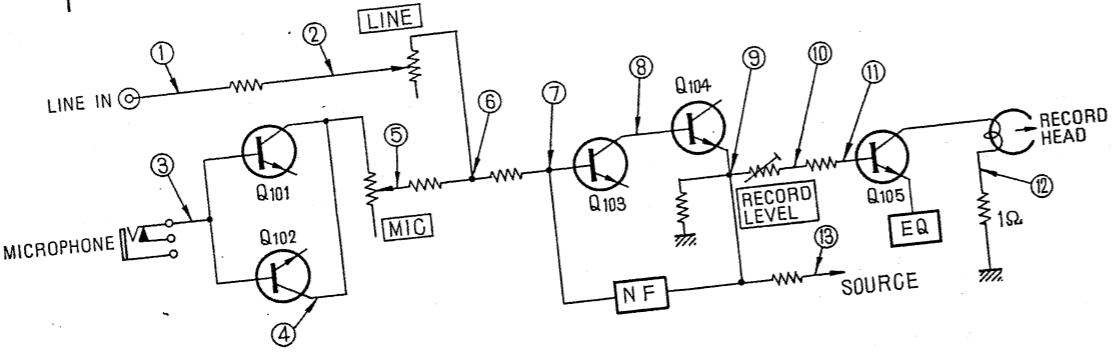
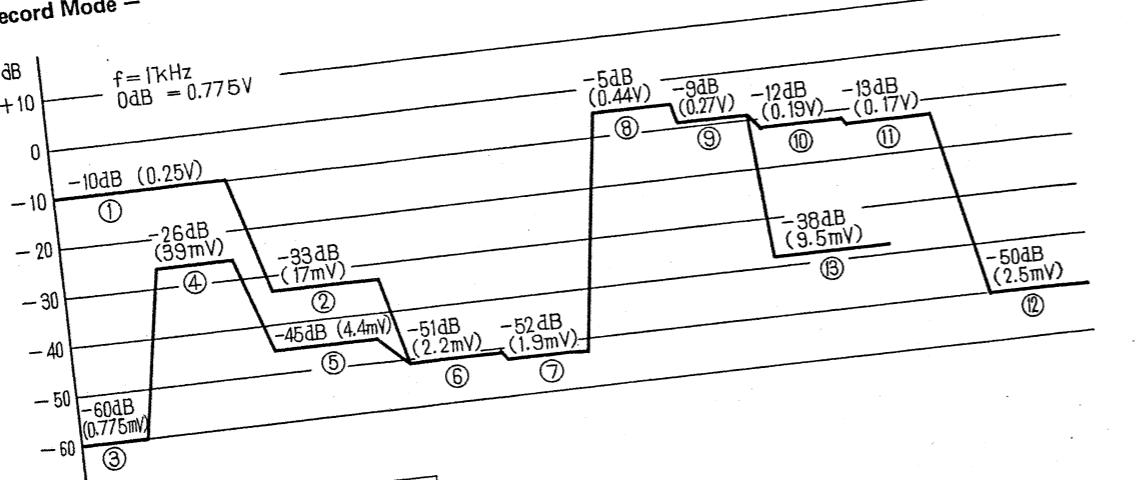
• PL951, 952 are included in level meter (ME951, 952).

• Voltage values shown are measured to chassis ground with a voltmeter (DC 20 k Ω /V, AC 8 k Ω /V) in playback mode. Voltages in () are for record mode. AC voltages in bias osc circuit are measured with VTVM.

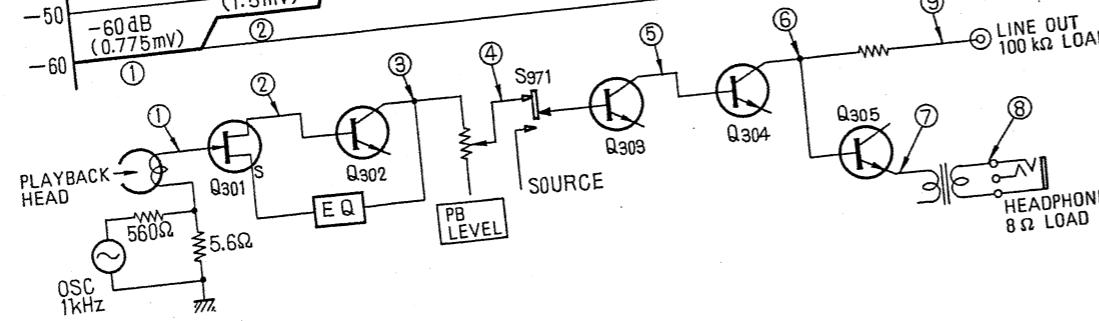
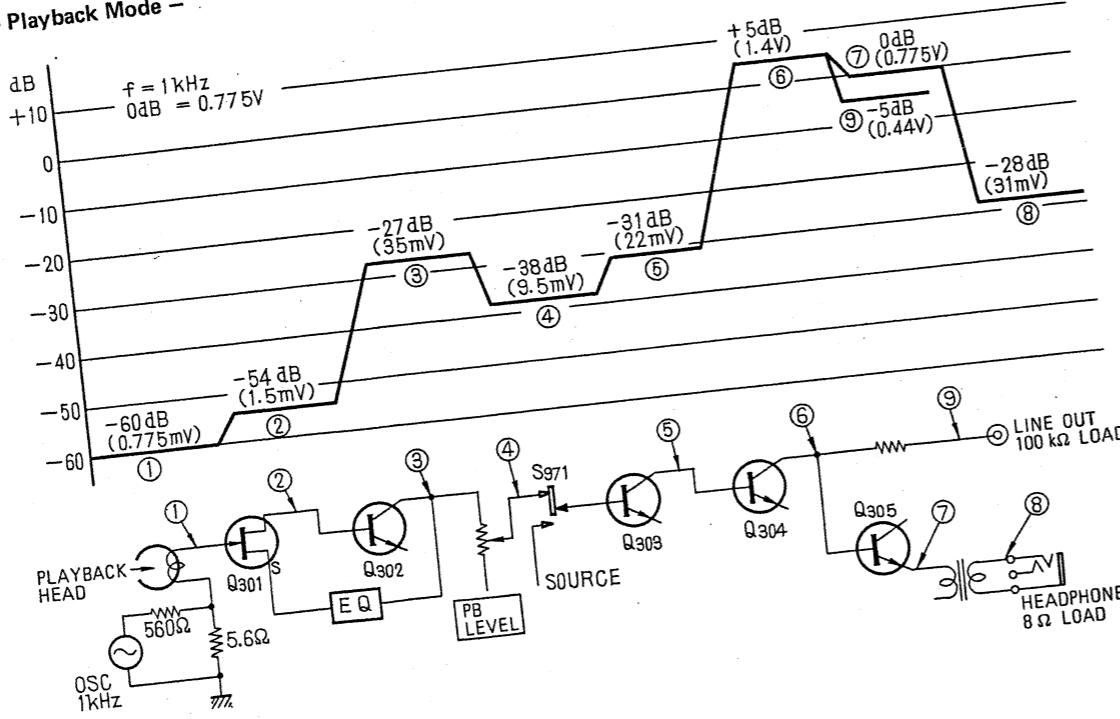
TC-558 TC-558

MEMO

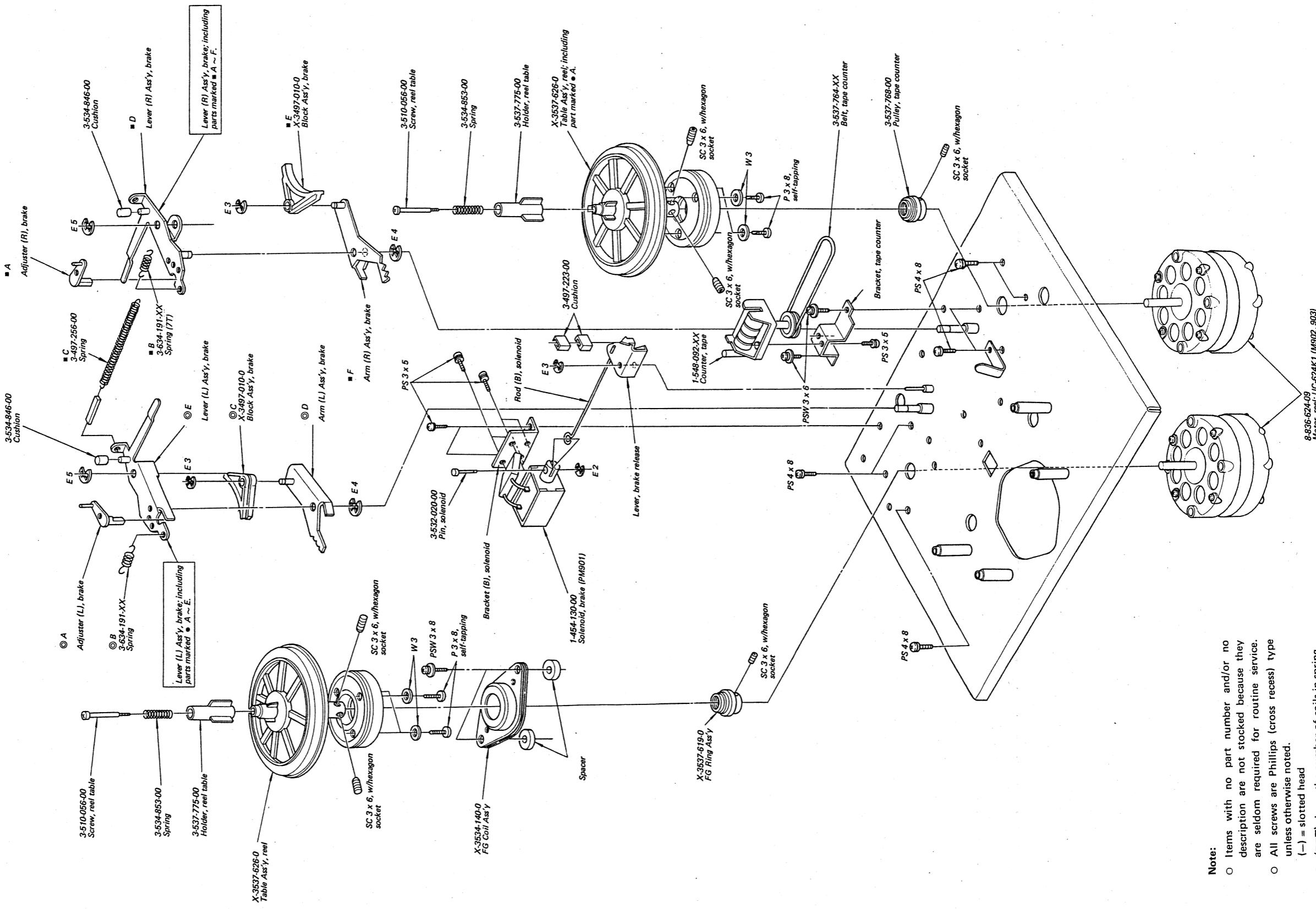
4-5. LEVEL DIAGRAM
— Record Mode —



— Playback Mode —



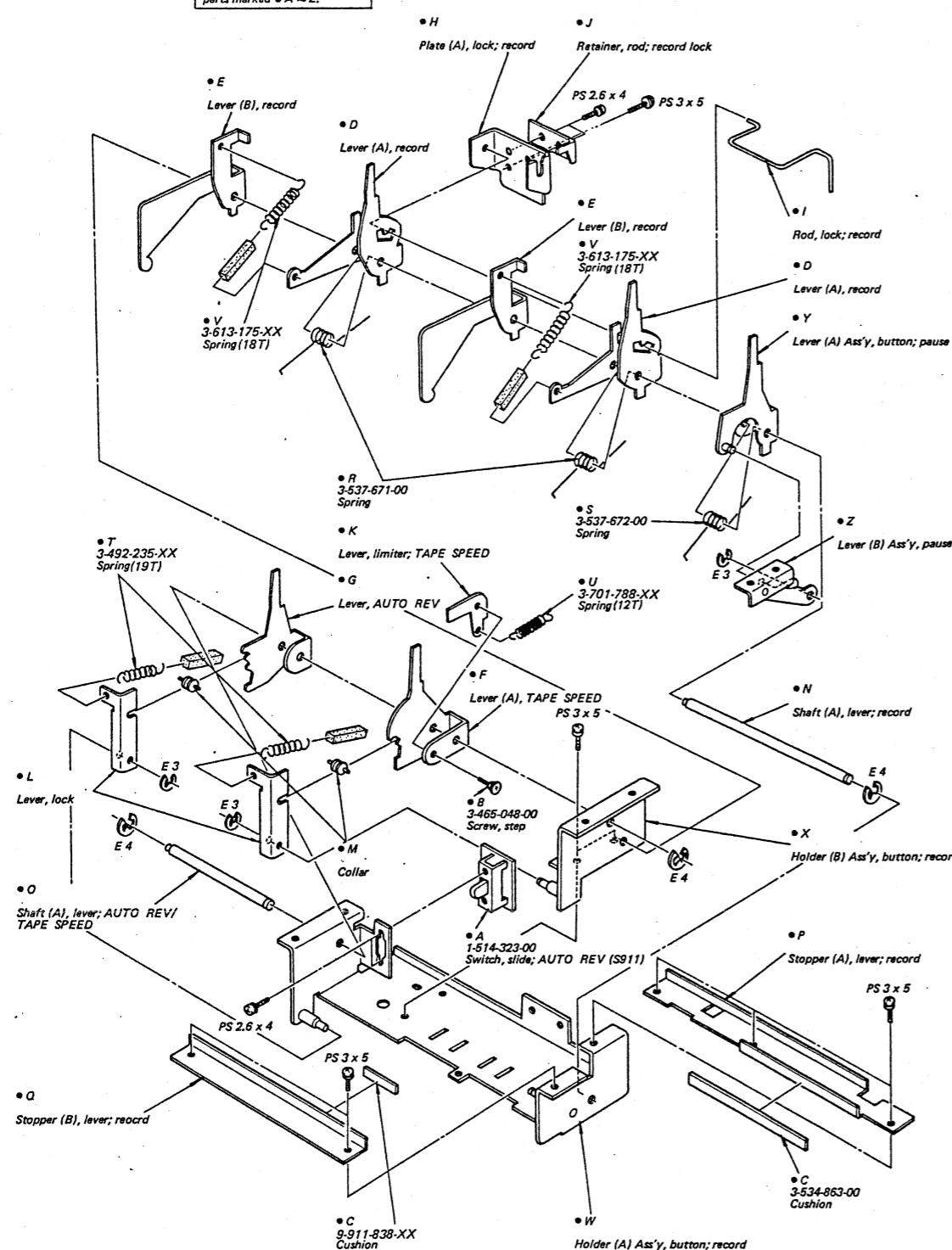
SECTION 5
EXPLODED VIEWS

5-1. EXPLODED VIEW (1)

Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (—) = slotted head
- (□□T) shows the number of coils in spring.

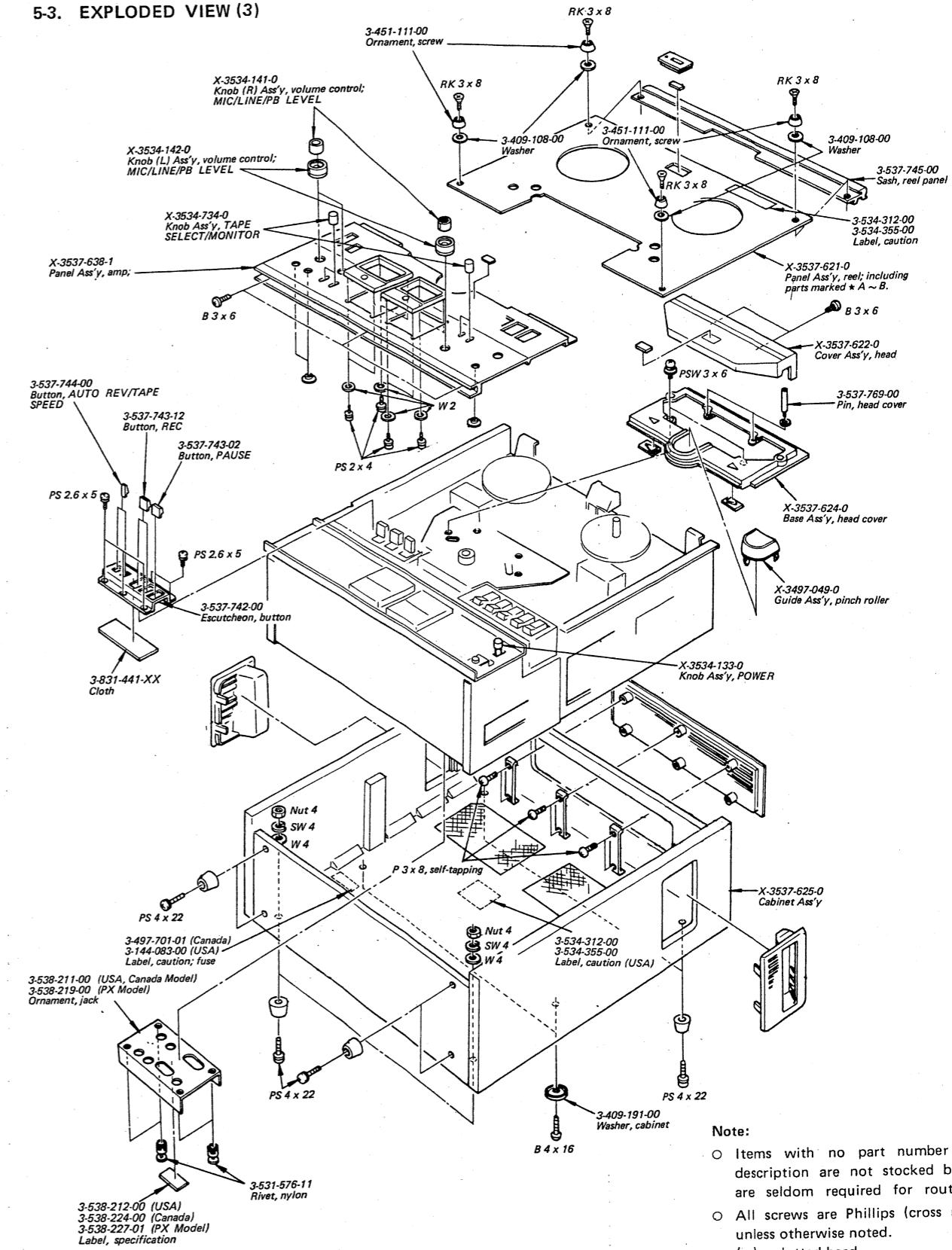
5-4. EXPLODED VIEW (4) Button Ass'y, record; including parts marked • A ~ Z.



Note

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) ≈ slotted head
- (□□T) shows the number of coils in spring.

5-3. EXPLODED VIEW (3)

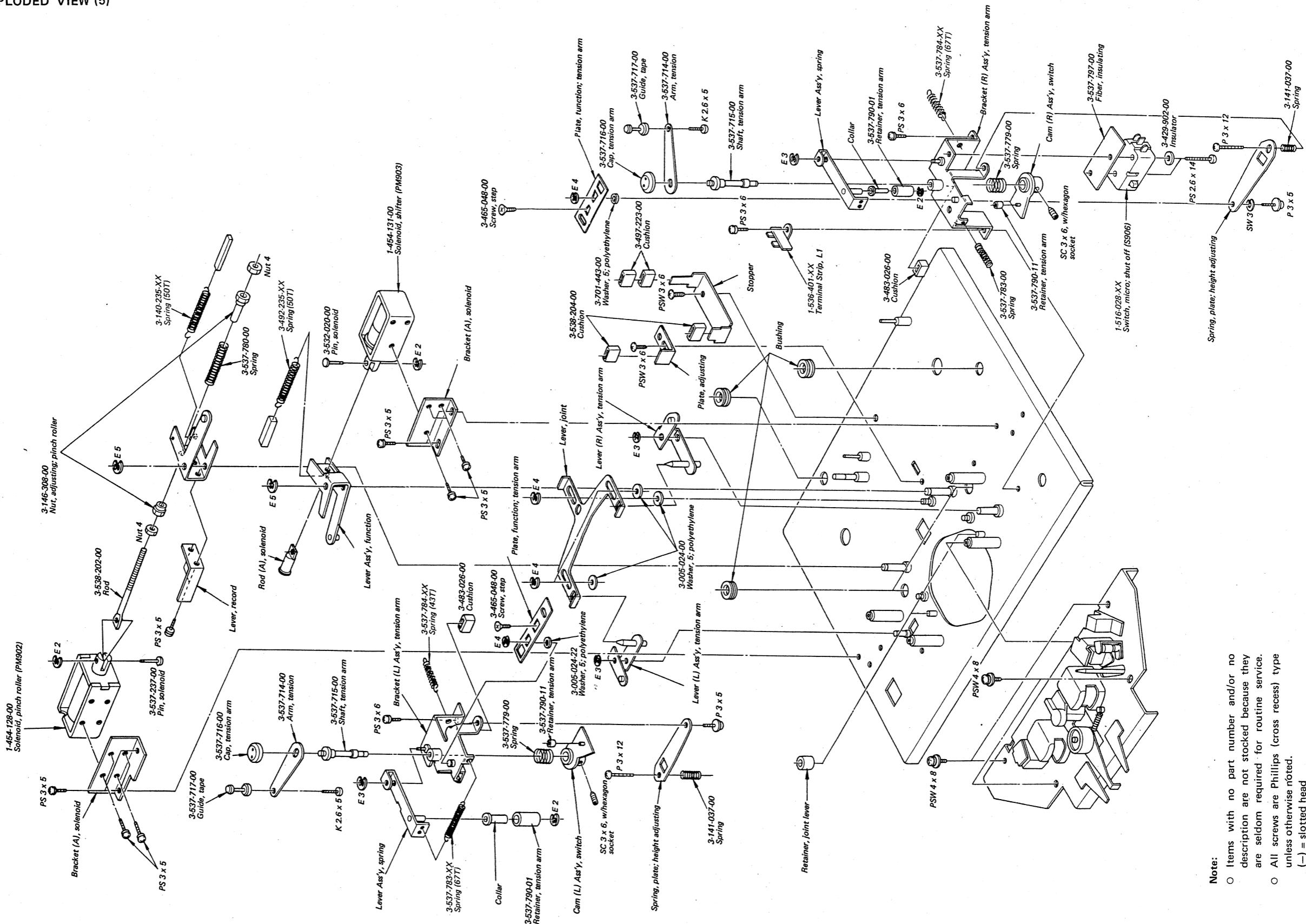


Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head

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5-5. EXPLODED VIEW (5)

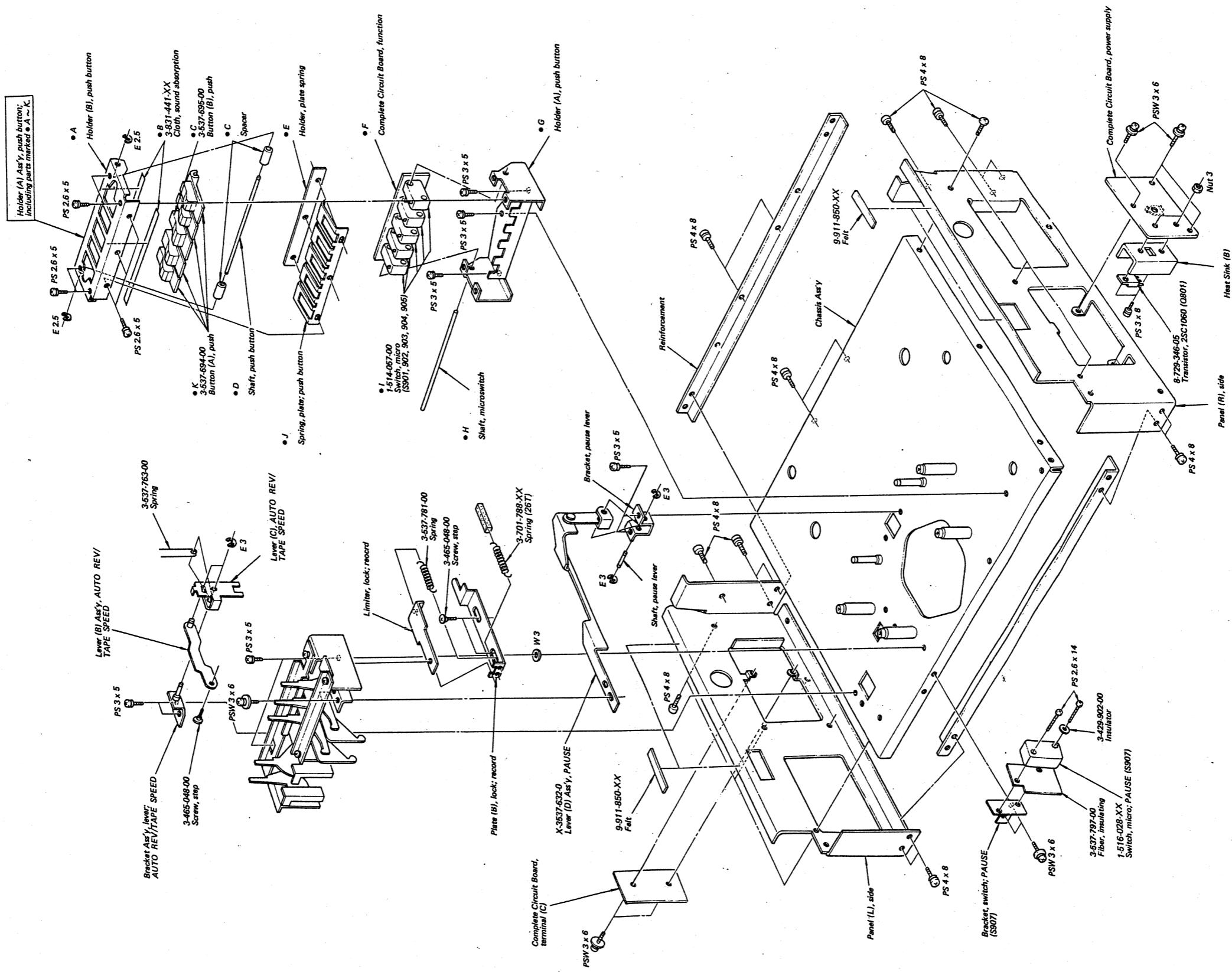


Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head
 $(\square \square T)$ shows the number of coils in spring.
-

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5-6. EXPLODED VIEW (6)

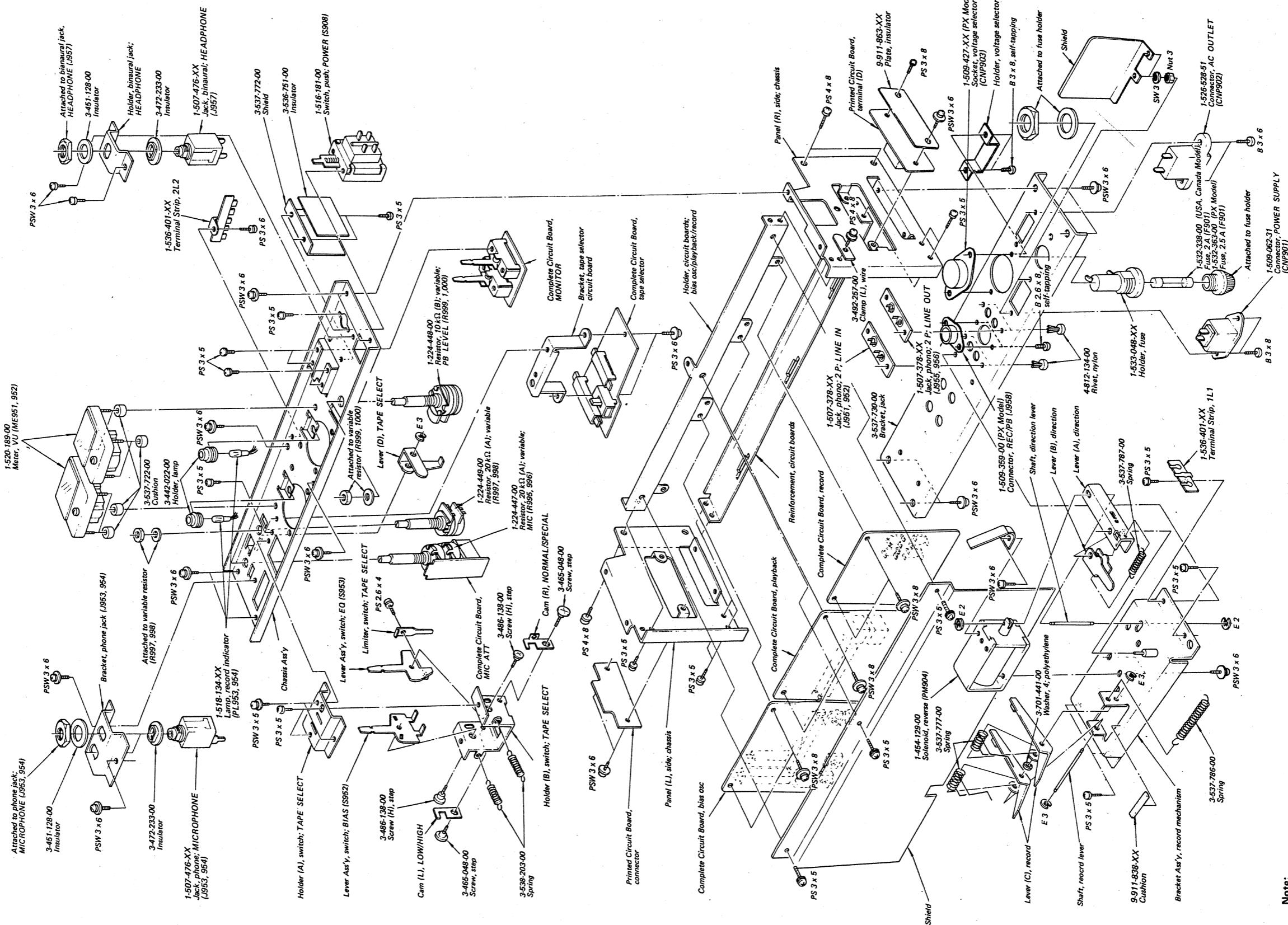


Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head
- (□□T) shows the number of coils in spring.

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5-7. EXPLODED VIEW (7)

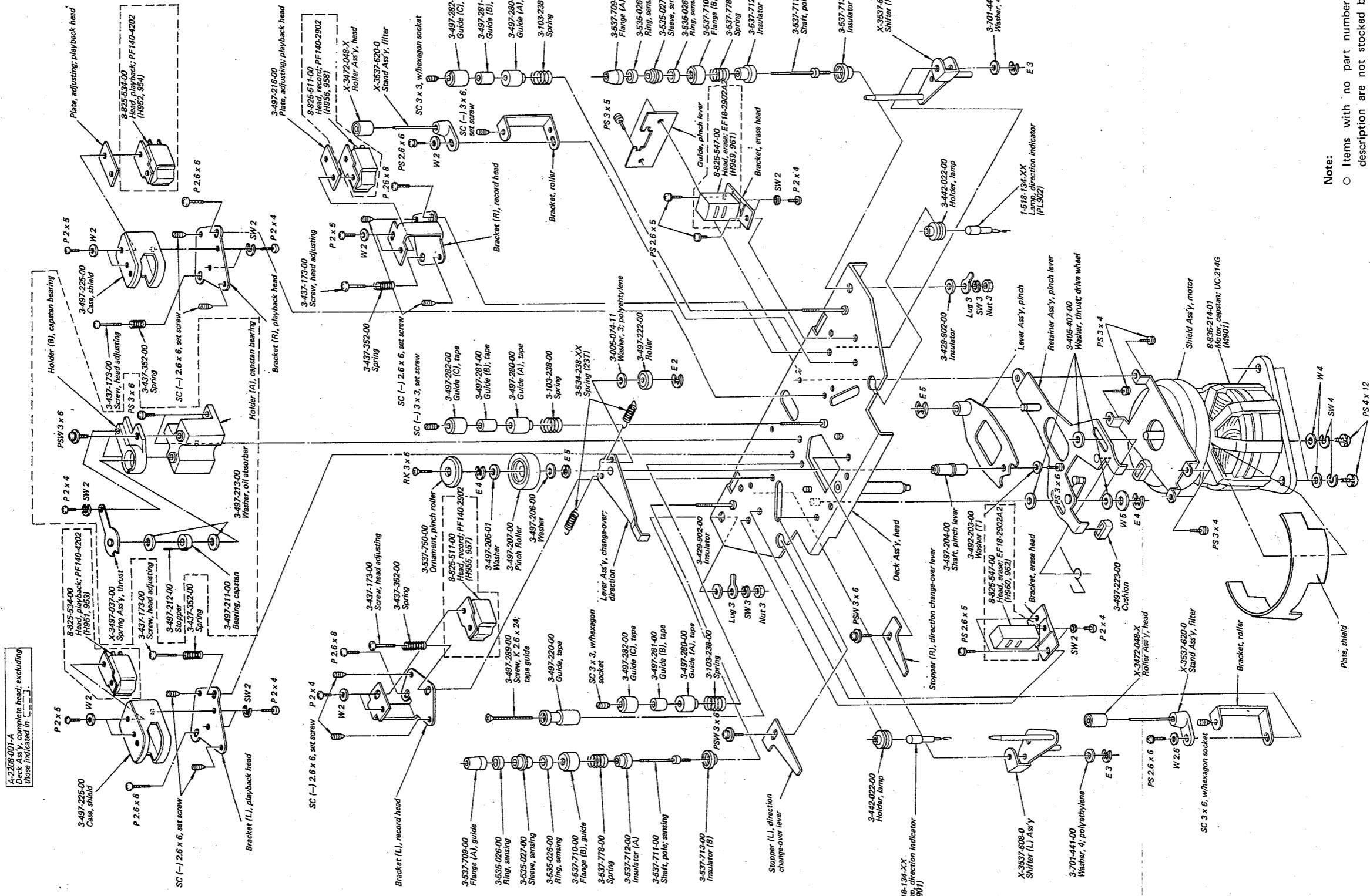


Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head

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5-8. EXPLODED VIEW (8)



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
(-) = slotted head
- (□□T) shows the number of coils in spring.

SECTION 6

PARTS LIST

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			
SEMICONDUCTORS								
Q101, 201	Transistor	2SC1362	L301, 401	1-409-130-00	2 mH, variable inductor			
Q102, 202	Transistor	2SA678	L501, 502	1-407-195-XX	1 mH, microinductor			
Q103, 203	Transistor	2SC1364	L503, 504	1-407-239-00	3.3 mH, variable inductor			
Q104, 204	Trnasistor	2SC1362	L505 ~ 508	1-407-284-00	1 mH, variable inductor			
Q105, 205	Transistor	2SC1362	L951	1-407-213-XX	1.5 mH, microinductor			
Q301, 401	FET	2SK43	L952	1-407-196-XX	1.2 mH, microinductor			
Q302, 402	Transistor	2SC1362	L953, 954	1-407-198-XX	2.2 mH, microinductor			
Q303, 403	Transistor	2SC1364	L955	1-407-213-XX	1.5 mH, microinductor			
Q304, 404	Transistor	2SC1362	L956	1-407-193-XX	1.2 mH, microinductor			
Q305, 405	Transistor	2SC1364	L957, 958	1-407-198-XX	2.2 mH, microinductor			
Q306, 406	Transistor	2SC1364	TRANSFORMERS					
Q501 ~ 507	Transistor	2SC1364	T301, 401	1-427-299-00	Output			
Q601 ~ 613	Transistor	2SC1364	T501	1-433-174-00	Bias Osc			
Q801	Transistor	2SC1060	T901	1-442-332-00	Power (USA, Canada Model)			
Q802, 803	Transistor	2SC1364	T901	1-442-349-00	Power (PX Model)			
Q901	Transistor	2SD326	CAPACITORS					
Q902	Transistor	2SD291	All capacitors are in μ F unless otherwise indicated. (p = $\mu\mu$, elect = electrolytic)					
Q903	Transistor	2SC867	C101, 201	1-121-398-11	10	25 V	elect	
IC701	Integrated Circuit	CX-032B	C102, 202	1-121-413-11	100	6.3 V	elect	
D301, 401	Diode	1T22	C103, 203	1-121-416-11	100	2.5 V	elect	
D302, 402	Diode	1T22	C105, 205	1-121-398-11	10	25 V	elect	
D501, 502	Diode	1T40	C106, 206	1-121-416-11	100	25 V	elect	
D601 ~ 612	Diode	1T40	C107, 207	1-121-416-11	100	25 V	elect	
D613, 614	Diode	1T22	C108, 208	1-121-398-11	10	25 V	elect	
D615, 616	Diode	1T40	C109, 209	1-121-416-11	0.47	50 V	elect	
D617 ~ 621	Diode	SIB01-02	C110, 210	1-121-398-11	100	6.3 V	elect	
D622, 623	Diode	1T40	C111, 211	1-105-669-12	0.0047	50 V	mylar	
D624	Diode	SIB01-02	C112, 212	1-121-398-11	10	25 V	elect	
D701 ~ 705	Diode	SIB01-02	C113, 213	1-121-726-11	0.47	50 V	elect	
D801 ~ 804	Diode	SIB01-02	C114, 214	1-121-398-11	10	25 V	elect	
D805	Diode	MZ-08	C115, 215	1-121-416-11	100	25 V	elect	
D901	Diode	SIB01-02	C301, 401	1-121-416-11	100	25 V	elect	
D941 ~ 943	Diode	SIB01-02	C302, 402	1-131-191-11	47	6.3 V	solid tantalum	
			C303, 403	1-105-661-12	0.001	50 V	mylar	
			C304, 404	1-107-135-11	150 p	50 V	silvered mica	
			C305, 405	1-123-139-11	100	16 V	elect	

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			
C306, 406	1-107-123-11	47 p	50 V	silvered mica	
C307, 407	1-121-398-11	10	25 V	elect	
C308, 408	1-121-420-11	220	10 V	elect	
C309, 409	1-105-678-12	0.027	50 V	mylar	
C310, 410	1-105-665-12	0.0022	50 V	mylar	
C311, 411	1-121-416-11	100	25 V	elect	
C312, 412	1-121-402-11	33	10 V	elect	
C313, 413	1-121-410-11	47	25 V	elect	
C314, 414	1-121-398-11	10	25 V	elect	
C315, 415	1-105-661-12	0.001	50 V	mylar	
C316, 416	1-121-479-11	22	16 V	elect	
C317, 417	1-107-109-11	12 p	50 V	silvered mica	
C318, 418	1-121-413-11	100	6.3 V	elect	
C319, 419	1-107-244-11	470 p	50 V	silvered mica	
C320, 420	1-121-398-11	10	25 V	elect	
C321, 421	1-121-392-11	3.3	25 V	elect	
C501, 502	1-105-665-12	0.0022	50 V	mylar	
C503	1-121-410-11	47	25 V	elect	
C504	1-121-395-11	4.7	25 V	elect	
C505	1-105-681-12	0.047	50 V	mylar	
C506	1-105-675-12	0.015	50 V	mylar	
C507	1-107-183-11	390 p	500 V	silvered mica	
C508	1-141-155-12	200 p ~ 600 p		trimmer	
C509	1-107-187-11	560 p	500 V	silvered mica	
C510, 511	1-107-179-11	270 p	500 V	silvered mica	
C512 ~ 515	1-141-034-11	30 p ~ 200 p		trimmer	
C516 ~ 519	1-107-036-11	68 p	500 V	silvered mica	
C520	1-107-173-11	150 p	500 V	silvered mica	
C601	1-121-392-11	3.3	52 V	elect	
C602 ~ 604	1-121-726-11	0.47	50 V	elect	
C605, 606	1-121-398-11	10	25 V	elect	
C607	1-105-837-12	0.022	50 V	mylar	
C608	1-121-395-11	4.7	25 V	elect	
C609	1-121-411-11	47	50 V	elect	
C610	1-105-841-12	0.047	50 V	mylar	
C611	1-105-833-12	0.01	50 V	mylar	
C612	1-121-726-11	0.47	50 V	elect	
C613	1-105-839-12	0.033	50 V	mylar	
C614	1-121-152-11	22	50 V	elect	
C615	1-105-841-12	0.047	50 V	mylar	
C616	1-105-845-12	0.1	50 V	mylar	

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			
C701	1-121-818-11	10	160 V	elect	
C702	1-121-404-11	33	25 V	elect	
C703	1-121-416-11	100	25 V	elect	
C704 ~ 705	1-121-398-11	10	25 V	elect	
C706	1-105-661-12	0.001	50 V	mylar	
C707	1-131-239-11	6.8	35 V	solid tantalum	
C708	1-105-683-12	0.068	50 V	mylar	
C709	1-105-527-12	0.15	50 V	mylar	
C710	1-105-675-12	0.015	50 V	mylar	
C711	1-121-409-11	47	16 V	elect	
C801, 802	1-121-810-11	470	50 V	elect	
C803 ~ 805	1-121-388-11	1000	35 V	elect	
C806	1-121-357-11	100	35 V	elect	
C901 ~ 903	1-117-082-11	4	250 V	metalized paper	
C941	1-129-774-11	0.068	200 V	polypropylene	
C951, 952	1-121-409-11	47	16 V	elect	
C953	1-105-519-12	0.033	50 V	mylar	
C954	1-105-517-12	0.022	50 V	mylar	
C955	1-105-522-12	0.056	50 V	mylar	
C956, 957	1-105-519-12	0.033	50 V	mylar	
C958	1-105-517-12	0.022	50 V	mylar	
C959	1-105-522-12	0.056	50 V	mylar	
C960	1-105-519-12	0.033	50 V	mylar	
C991 ~ 998	1-101-885-11	56 p	50 V	ceramic	

RESISTORS

All resistors are in Ω . $\frac{1}{4}W$, Regular type carbon and composition resistors are omitted.

Check schematic diagram for resistance values.

(k = 1000, M = 1000 k)

R125, 225	1-224-645-XX	22 k		adjustable
R126, 226				
R134, 234	1-206-483-11	68	2 W	metal oxide
R313, 413	1-224-251-XX	4.7 k		adjustable
R314, 414				
R315, 415	1-224-253-XX	22 k		adjustable
R316, 416				
R333, 433	1-224-250-XX	2.2 k		adjustable
R701	1-206-652-11	330	2 W	metal oxide
R718	1-224-645-XX	10 k		adjustable
R719	1-224-646-XX	22 k		adjustable

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		
R801	1-206-447-00	2.2		metal oxide
R806	1-224-644-XX	4.7 k		adjustable
R901	1-223-072-00	1.5 k	10 W	adjustable, wirewound
R902	1-223-070-00	82	15 W	adjustable, wirewound
R941	1-217-303-00	27	5 W	metal oxide
R995, 996	1-224-447-00	20 k (A) variable, MIC		
R997, 998	1-224-449-00	20 k (A) variable, LINE		
R999, 1000	1-224-448-00	10 k (B) variable, PB	LEVEL	

SWITCHES

S301, 501	1-514-813-XX	Slide, direction; forward/reverse
S502, 503	1-514-813-XX	Slide, record/playback
S701	1-514-803-00	Slide, TAPE SPEED
S901	1-514-057-XX	Micro, fast forward
S902	1-514-057-XX	Micro, forward
S903	1-514-057-XX	Micro, stop
S904	1-514-057-XX	Micro, reverse
S905	1-514-057-XX	Micro, rewind
S906	1-516-028-XX	Micro, shut off
S907	1-516-028-XX	Micro, PAUSE
S908	1-516-181-00	Push, POWER
S911	1-514-323-00	Slide, AUTO REV
S951	1-514-861-XX	Slide, TAPE SPEED
S952	1-516-778-XX	Slide, BIAS (TAPE SELECT)
S953	1-514-861-XX	Slide, EQ (TAPE SELECT)
S971, 972	1-516-366-00	Lever Slide, MONITOR

JACKS

J951, 952	1-507-349-21	2 P Phono, LINE IN
J953, 954	1-507-476-XX	MICROPHONE
J955, 956	1-507-378-XX	2 P Phono, LINE OUT
J957	1-507-476-XX	Binaural, HEADPHONE
J958	1-509-359-00	Connector, REC/PB (PX Model)
CNP901	1-509-062-31	Connector, POWER SUPPLY
CNP902	1-526-528-51	Connector, AC OUTLET
CNP903	1-509-427-XX	Socket, voltage selector (PX Model)

HEADS

H959 ~ 962	8-825-547-00	Erase, EF18-2902A2
H951 ~ 954	8-825-534-00	Playback, PF140-4202
H955 ~ 958	8-825-511-00	Record, RF140-2902

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	
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MOTORS

M901	8-836-214-01	Capstan, UC-214G
M902, 903	8-836-624-09	Reel, UC-624K1

SOLENOIDS

PM901	1-454-130-00	Brake
PM902	1-454-128-00	Pinch Roller
PM903	1-454-131-00	Shifter
PM904	1-454-129-00	Reverse

MISCELLANEOUS

CP601 ~ 613	1-231-057-31	Encapsulated Component, 0.033 μF + 120 Ω, 500 V
CP901, 941	1-101-534-31	Encapsulated Component, 0.1 μF + 120 Ω, 500 V
F901	1-532-338-00	Fuse, 2 A (USA, Canada Model)
F901	1-532-363-XX	Fuse, 2.5 A (PX Model)
FG901		Included in Capstan Motor (M901)
FG902		Included in FG Ring Ass'y (X-3537-619-0)
ME951, 952	1-520-189-00	Meter, VU
PL901, 902	1-518-134-XX	Lamp, direction indicator
PL951, 952		Included in Meter (M951, 952)
PL953, 954	1-518-134-XX	Lamp, record indicator
RY601 ~ 604	1-515-127-00	Relay
	1-533-048-XX	Holder, fuse
	1-536-393-00	Terminal Strip, L1
	1-536-395-00	Terminal Strip, 1L1
	1-536-401-XX	Terminal Strip, 2L2

ACCESSORIES

<u>Part No.</u>	<u>Description</u>
X-2440-015-1	Reel Ass'y, R-7ES (PX Model)
X-3518-102-1	Reel Ass'y, R-7ES (USA and Canada Model)
X-3701-018-2	Stick Ass'y, head cleaning (Canada and PX Model)
1-534-049-31	Cord, connection; RK-74 (USA and Canada Model)
1-534-049-51	Cord, connection; RK-74 (PX Model)
1-534-099-XX	Cord, power (PX Model)
1-534-262-16	Cord, power (USA Model)
1-534-375-12	Cord, power (Canada Model)
3-140-949-03	Sheet, sensing
3-401-193-02	Tape, cotton (USA Model)
3-780-423-11	Manual, instruction (Canada Model)
3-780-423-21	Manual, instruction (USA Model)
3-780-423-61	Manual, instruction (PX Model)

SECTION 7

HARDWARE

<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
SCREWS			
All screws are Phillips type (cross recess type) unless otherwise indicated. (-): slotted head.			
7-621-255-25	P 2 x 4	7-682-661-01	PS 4 x 8
7-621-255-35	P 2 x 5		PS 4 x 22
7-621-559-32	K 2.6 x 5	7-682-947-01	PSW 3 x 6
7-621-659-51	RK 3 x 8	7-682-948-01	PSW 3 x 8
7-621-712-38	SC 2.6 x 4, w/hexagon socket	7-682-961-01	PSW 4 x 8
7-621-712-51	(-) SC 2.6 x 6	7-682-963-01	PSW 4 x 12
7-628-253-95	PS 2.6 x 4	7-683-140-00	SC 3 x 6, w/hexagon socket
7-628-254-05	PS 2.6 x 5	7-683-237-31	SC 3 x 3, w/hexagon socket
7-628-254-15	PS 2.6 x 6	7-683-240-31	(-) SC 3 x 3
7-628-254-25	PS 2.6 x 8	WASHERS	
7-628-254-95	PS 2.6 x 14	7-623-105-12	2
7-682-146-01	P 3 x 5	7-623-107-12	2.6
7-682-150-01	P 3 x 12	7-623-108-12	3
7-682-347-15	RK 3 x 6	7-623-110-12	4
7-682-547-01	B 3 x 6	7-623-112-12	5
7-682-548-01	B 3 x 8	7-623-205-22	2, spring
7-682-565-01	B 4 x 16	7-623-208-22	3, spring
7-682-624-01	PS 2 x 4	7-623-210-21	4, spring
7-682-645-01	PS 3 x 4	RETAINING RINGS	
7-682-646-01	PS 3 x 5	7-623-508-01	Lug 3
7-682-647-01	PS 3 x 6	7-624-104-01	E 2
7-682-648-01	PS 3 x 4	7-624-106-01	E 3
7-682-649-01	PS 3 x 10	7-624-108-01	E 4
7-682-660-01	PS 4 x 6	7-624-109-01	E 5
		7-624-118-11	E 2.5

— Hardware Nomenclature —

P	Pan Head Screw	SC	Set Screw
PS	Pan Head Screw with Spring Washer	E	— Retaining Ring (E Washer)
K	Flat Countersunk Head Screw	W	Washer
B	Binding Head Screw	SW	Spring Washer
RK	Oval Countersunk Head Screw	LW	Lock Washer
T	Truss Head Screw	N	Nut
R	Round Head Screw	Example —	
F	Flat Fillister Head Screw	P 3x10	Length in mm (L)
			Diameter in mm (D)
			Type of Head

Sony Corporation

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